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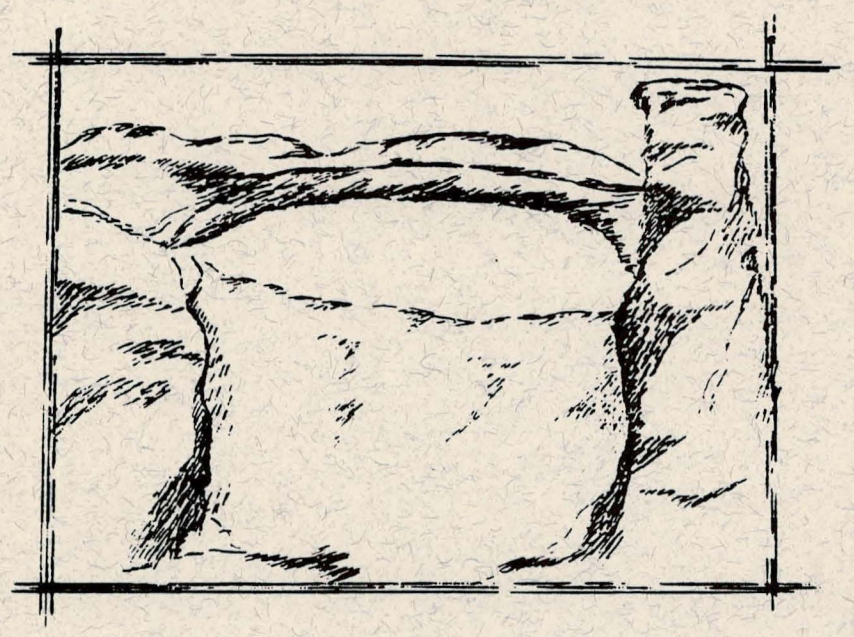
T.V.

Ruby Canyon-Black Ridge User Study

Final Report



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NORTHERN ARIZONA UNIVERSITY
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Final Report

Submitted in Partial Fulfillment of

Cooperative Agreements:

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by

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INTRODUCTION

The Ruby Canyon-Black Ridge (RCBR) Special Recreation Management Area provides a variety of recreational opportunities for visitors. The 1992-93 user study was designed to: 1) provide BLM managers with information on visitors' use in the area, their opinion of management activities, and their travel in the surrounding region; and 2) serve as a practical test in implementing the Benefits Approach to Leisure (BAL) to recreation management.

This introductory chapter provides background information on the benefits of leisure and the application of a benefits-based approach to recreation resource management. It includes a definition of benefits and a brief discussion of the different types of benefits that arise from recreation on public lands. The section closes with a brief overview of other BBM pilot tests currently being implemented throughout the United States.

Background

Benefits of Recreation

According to Driver et al. (1987a p. 295), the word 'benefit' is used to denote a "desirable change of state; it is a specific improved condition or state of an individual, or a group of individuals, of a society or even of nonhuman organisms." In addition, a benefit can be considered a prevention of a worse condition.

The income of money is obviously an "improved condition," a benefit, but more complex "improvements" can also be conceptualized for people who take part in recreational engagements. For example, people improve their cardiovascular systems while hiking (Froelicher and Froelicher 1991), they can learn more about their environment (Roggenbuck

et al. 1990), or they may increase family bonding while camping (Orthner and Mancini 1991). These are just a small sample of the benefits produced for people who engage in recreation. It is beyond the scope of this report to present the multitude of recreation benefits that are currently identified. For the best synopsis of knowledge concerning recreation benefits, see the text, *Benefits of Leisure* (Driver, Peterson, and Brown 1991).

Researchers have placed the benefits of recreation into two categories: short-term (i.e., benefits derived during the recreational engagement) and long-term benefits (i.e., later benefits) (Lee and Driver 1992, Driver 1994, Schreyer and Driver 1989). A short-term benefit can be considered the pleasurable feeling of relaxation while floating down a river. In the long-run, the relaxation gained on that river running experience may re-charge an individual, making him or her a more productive worker. Figure 1 provides a more detailed example of short-term and later benefits. Researchers have identified five types of long- and short-term benefits: (1) physiological benefits (i.e., improved functioning or performance); (2) psychological benefits (i.e., improved state of mind); (3) social benefits; (4) national, regional, and local economic benefits; and (5) environmental benefits (Driver and Brown 1983).

Benefits Based Management

Research to document the benefits of leisure and recreation continues. Concurrently, an effort is underway to apply the BAL to recreation management. Benefits-Based Management (BBM) is an approach to managing recreation that targets the provision of

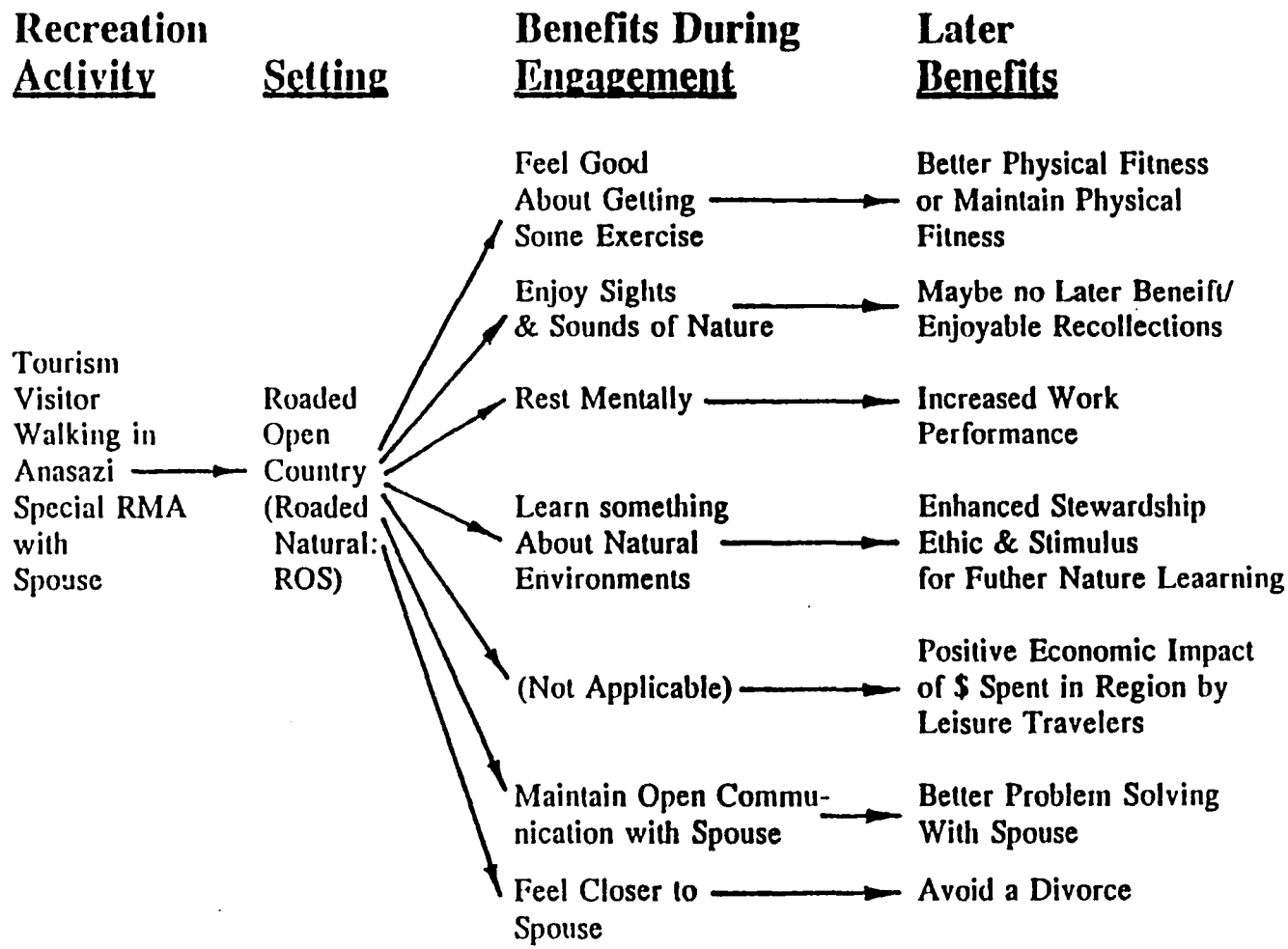
Recreation Activity
Setting
Benefits During Engagement
Later Benefits
Tourism Visitor Walking in Anasazi Special RMA with Spouse
Roaded Open Country (Roaded Natural: ROS)
Feel Good About Getting Some Exercise
Better Physical Fitness or Maintain Physical Fitness
Enjoy Sights & Sounds of Nature
Maybe no Later Beneift/ Enjoyable Recollections
Rest Mentally
Increased Work Performance
Learn something About Natural Environments
Enhanced Stewardship Ethic & Stimulus for Futher Nature Leaarning
(Not Applicable)
Positive Economic Impact of $ Spent in Region by Leisure Travelers
Maintain Open Commu-nication with Spouse
Better Problem Solving With Spouse
Feel Closer to Spouse
Avoid a Divorce

Figure 1. Immediate and Later Benefits.

opportunities for users to achieve benefits. The provision of benefit achievement opportunities is viewed as the output of the recreation management process.

With its focus on beneficial outcomes, the BBM approach provides managers with objective justification for allocations of public funds to recreation, clarifies visitor demands and needs, promotes sound resource allocation decisions, optimizes management by clarifying outputs, enables consumers to exercise greater sovereignty in their leisure decision making, facilitates closer working relationships among a variety of recreation-tourism partners, and promotes the leisure professions (Bruns et al. 1994). Managers can more clearly state their management directions when they understand exactly how the public will benefit from recreation taking place on their wildlands (Driver 1994).

Evolution of BBM

When federal agencies first began to manage for recreation, managers only concerned themselves with providing the opportunity for people to take part in specific activities and ignored the quality of those activities (Wagar 1966). Activity Based Management (ABM) was primarily supply oriented and focused on the facilities or the resources. The outcomes and quality of the recreation experience were largely ignored (Lee and Driver 1992). Managers viewed visitors as the input. Those same visitors, after having participated in some sort of recreation activity, were considered the output. This view made management outputs easy to quantify, using numbers of users per unit of time (e.g., visitor days), but a false assurance of quality was perceived when a recreation area was used to, or in excess of, it's capacity (Driver and Brown 1975).

Experienced Based Management (EBM) focuses on the psychological outputs of recreation. It builds upon and supplements ABM but does not replace it (Lee and Driver 1992). Activities are still considered an important part of recreation management, but within an experience-based approach managers can better understand their role in producing the outputs of recreation. Managers can provide people the opportunity to obtain their desired experiences by manipulating the physical, social, and managerial setting components of an area. They are not directly involved with producing an experience as only the participant can realize that output (Driver and Tocher 1970). This requires managers to have as much knowledge about their visitors' perceptions and desires for experiences as well as information about the recreation setting over which they have some control.

With a diversity of people comes a diversity in desired experiences. Therefore, managers have the opportunity to provide a variety of different settings that , in turn, contain many opportunities for recreationists to realize their experiential goals. Experience opportunities were explicitly targeted in the Recreation Opportunity Spectrum (ROS) (Driver et al. 1987b). ROS is a recreation management system designed to provide for setting characteristics that vary on a spectrum from primitive to urban in order to provide visitors diverse opportunities to achieve experiences (Driver et al. 1987b).

Most experiences obtained during a recreational engagement can also be considered benefits to that recreationist (Driver 1994). Benefits-Based Management supplements and strengthens EBM with it's focus beyond psychological outcomes to include other types of benefits and a concerns for off-site as well as on-site benefits.

As mentioned earlier, the use of BBM requires managers to understand the diverse benefits that are produced when recreation occurs on their lands. BBM concentrates on all types of benefits produced. This includes benefits to the community and environment as well as those to on-site users. A great deal of research has been conducted on the different types of benefits that result from recreation or leisure (see Driver, Peterson, and Brown 1991), but information is needed to determine management's role in providing these benefits. The Ruby Canyon-Black Ridge User Study helps to provide some of this information.

Other BBM Pilot Projects

Benefits Based Management is in the initial stages of development. In addition to the RCBR project, several other pilot projects have been designed to test BBM concepts. The pilot studies involve close working relationships between managers and researchers using both professional judgment and research to identify benefits to individuals or groups of individuals that can be realized through recreation and to use this information to develop benefit-based objectives for managing recreation resources.

These pilot projects were developed under the guidance of B. L. Driver of the USDA Forest Service's Rocky Mountain Forest and Range Experiment Station (RMS) in cooperation with university researchers throughout the United States. Pilot projects focusing on forest recreation users are currently underway on the Coconino National Forest in Northern Arizona and the Jefferson National Forest in Virginia. The city of Portland, Oregon is working with researchers from Oregon State University and VPI are looking at what can be done within a municipal park system to intervene in some of the things that people describe

as urban ills (Bruns et al. 1994). The University of Minnesota is working with Minnesota Department of Natural Resources on a regional pilot test. The study, which involves several state parks across Minnesota, is designed to develop benefits-based management programs that will provide benefits identified as important by on-site visitors and adjacent communiites.

Ruby Canyon-Black Ridge User Study

The RCBR User Study was composed of three projects: a visitor study, focus group interviews with recreation user groups, and a survey of community leaders. These projects were designed to achieve the following study objectives:

(1) Describe visitors to the RCBR study area based on selected socio-demographic characteristics;

(2) Assess visitor use of the RCBR study area including activity participation and time spent in five designated zones;

(3) Identify visitor evaluation of any potential problems they might have encountered during their visit to the study area;

(4) Assess visitor support for possible management actions that could occur within the study area;

(5) Assess visitor preferences for a variety of management-provided services and their opinions of how well the BLM is doing in providing these services;

(6) Assess visitor desires for possible benefits or outcomes of their recreation visit to the study area and their evaluation of whether or not they were able to obtain desired benefits during their visit;

(7) Describe visitor travel in the nearby Grand Junction area including expenditures related to their visit to the study area.

The focus group interviews and community survey were designed to supplement the visitor study and enrich the data base on perceived benefits of the RCBR area. An additional source of data on potential benefit opportunities on the RCBR area was provided by area managers using a brainstorming session conducted early in the research process.

METHODOLOGY

Personnel from the Bureau of Land Management, Rocky Mountain Forest and Range Experiment Station, and Northern Arizona University worked cooperatively to design and implement the RCBR User Study. They developed the study objectives and the methods to reach those objectives. This chapter contains a description of the study area. The remainder of the report is divided according to the three projects. Methods used to gather data for each of the three projects are presented at the beginning of each section. The final section presents results of the initial manager brainstorming session.

Study Area

The Ruby Canyon-Black Ridge area is administered by the Bureau of Land Management the Grand Junction Resource Area within the Grand Junction District in western Colorado. The city of Grand Junction, Colorado is approximately 15 miles east of the RCBR area. The Utah-Colorado state line borders the area on the west, and the Colorado National Monument lies on the eastern end of RCBR. The Grand Valley which contains Grand Junction and several smaller communities lies on the eastern end of the study area. Interstate 70 runs through the Grand Valley and provides easy access to the northern segment of RCBR. The southern portion of the study area is accessed through the Colorado National Monument on the 4 wheel-drive Black Ridge access road. Figure 2 provides a map of the study area.

The most prominent feature of the RCBR area is the Colorado River which flows through Ruby Canyon. The unique erosion patterns found on the Colorado Plateau have

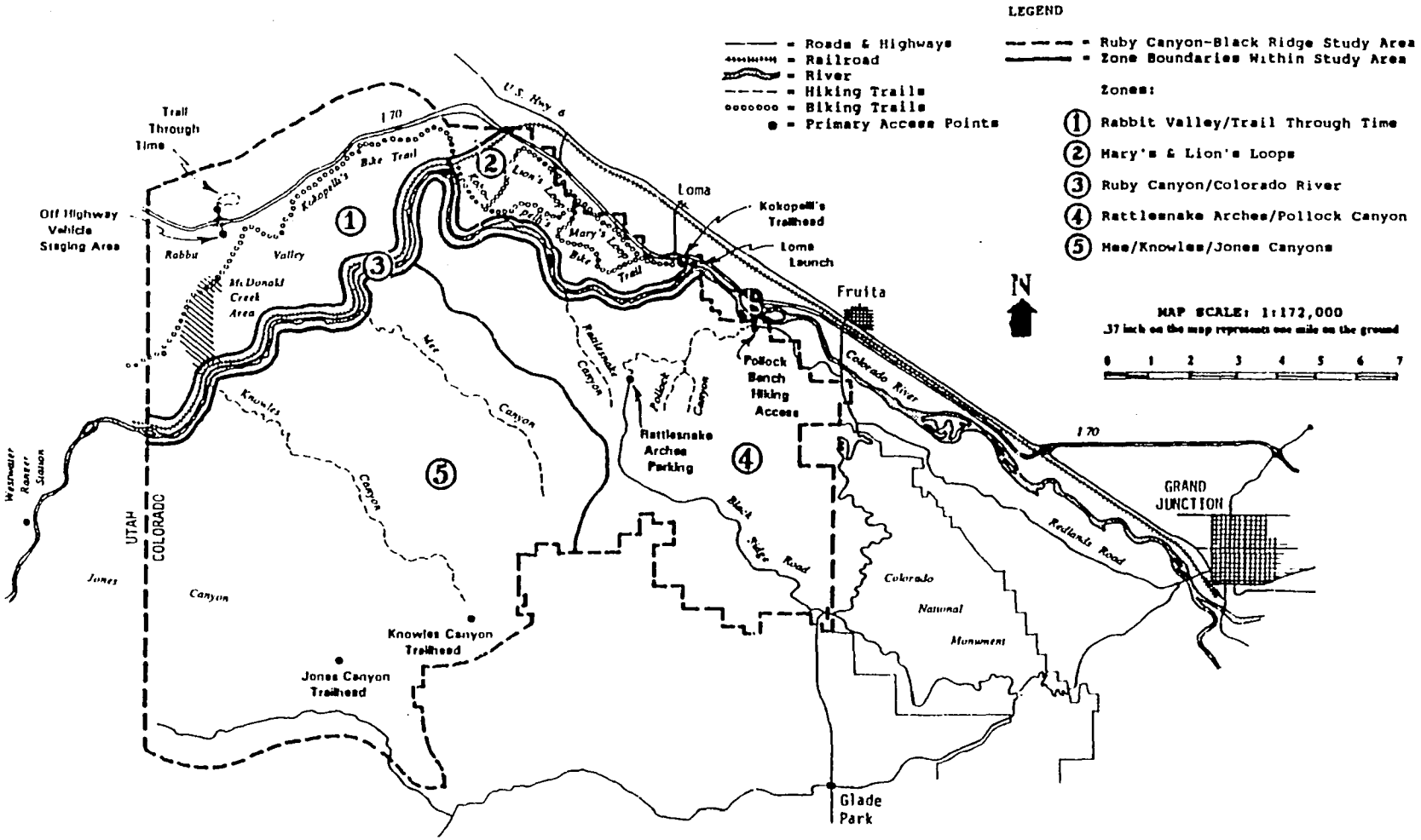

Figure 2. RCBR User Survey Study Area.

resulted in massive sandstone canyons and rock formations found with in the area. A concentration of arches, known as Rattlesnake Arches, can be found near the Black Ridge rim. The trailhead is accessible by hiking, mountain biking, and four-wheel driving. Along with scenic geologic features of the area, RCBR contains heavy concentrations of both archaeological and paelontological resources.

The elevation of the study area ranges from 4,200 feet above sea level at the Colorado River to 7,000 feet at Black Ridge in the southern part of the study area. Pinyon pine (*Pinus edulis)* and Utah juniper (*Juniperus ostiosperma*) woodlands is the dominant vegetation type throughout the area.

The Colorado River provides recreationists many water related activities. River running through Ruby Canyon is a common activity in the study area. Opportunities for hiking, horseback riding, four-wheel driving, mountain biking, and many other activities are plentiful in the canyon country landscape surrounding the river.

BLM recreation managers have constructed several hiking and mountain biking trails for visitors to use in the area. The 142 mile long Kokopelli's Mountain Bike Trail begins within the study area at the Loma Boat Launch. The trail continues along the northern edge of the Colorado River almost the entire length of the study area and extends west to Moab, Utah. The trail is famous among mountain bikers for its challenge and scenery as it winds through the desert sandstone and shale canyons. Many smaller mountain biking trails for recreationists desiring hour- and day-long rides have also been constructed north of the Colorado River.

A nature trail, the "Trail through Time," winds through a dinosaur quarry in the northwestern corner of the study area and allows visitors to view fossils lying in their natural state. Interpretive displays located at the site help visitors learn about the prehistoric dwellers of the region.

BLM managers and researchers divided the Ruby Canyon-Black Ridge area into five management zones based on physical characteristics and recreation activities available. Table 1 provides a description of the setting characteristics and dominant recreation activities found within each zone.

The results of the RCBR User Study are presented in the following chapters and are organized as follows: Visitor Study; Focus Group Interviews; Community Study; and Manager-Defined Benefit Opportunities. The methodology for each project is presented at the beginning of each chapter.

Table 1 Zone Description

Zone	Setting Characteristics	Most Popular Activities
1) Rabbit Valley/ Trail Though time	Several hiking, mountain biking, and motorcycle trails provide access to scenic vistas and prehistoric rock art. Kokapelli Mountain Bike Trail; Trail Through Time interpretive trail/dinosaur quarry.	Mountain biking Hiking Sightseeing Fossil viewing Horseback riding Off-highway vehicle driving
2) Mary's and Lion's Loops	Three mountain bike trails provide challenging rides and scenic views of the Colorado River. Dirt road allows access from Interstate 70.	Single-track mountain biking Sightseeing
3) Ruby Canyon/ Colorado River	Colorado River Canyon	River running Hiking Various water related activities
4) Rattlesnake Arches/ Pollock Canyon	Wilderness study area Sandstone arches 13 mile dirt 4X4 road 7.5 mile hiking trail	Hiking Mountain biking Four-wheel driving Sightseeing Horseback riding
5) Mee, Knowles, and Jones Canyons	Wilderness study area Long deep sandstone canyons	Backpacking

Visitor Study

METHODOLOGY

Sampling Plan

A stratified random sampling strategy was used to obtain a representative sample of visitors to the Ruby Canyon-Black Ridge area. The sampling period included the summer and fall seasons of 1992 and spring and early summer of 1993. Each day of the sampling period was stratified into two sampling blocks: a morning block (7:30 a.m. to 12:30 p.m.) and an afternoon block (1:00 p.m. to 6:00 p.m.). A random sample of blocks was selected from the total number of blocks in the sampling period and these were the assigned interview days. The selected interview blocks were distributed across the five management zones based on the proportion of use occurring in each zone, as determined by BLM staff.

The total number of visitors to be interviewed was roughly based on the amount of use received by the area. The number to be interviewed in each zone was based on the proportion of use occurring in each zone. Some adjustments in targeted sample sizes for each zone were made to include a representative number of participants in the particular activities associated with each zone in an attempt to have the range of activities represented in the study. Due to low use levels, very few interviews were conducted in Zone 5 (Mee, Knowles and Jones Canyons). A total of 1,025 visitors were contacted on-site during the sampling period.

Interview locations within zones were identified in consultation with BLM staff. Rabbit Valley/Trail Through Time (Zone 1) visitors were contacted in two areas. Recreationists were stopped in their cars as they entered Rabbit Valley. Signs alerted visitors that they may be stopped and interviewed. Rabbit Valley visitors were also contacted at the

Trail through Time trailhead. Recreationists using Mary's and Lion's Loops (Zone 2) were either interviewed at the Kokopelli's Trailhead or were stopped along the trail. The majority of Colorado River/Ruby Canyon (Zone 3) visitors were contacted at Loma Boat Launch. A small percentage of these visitors were interviewed at Westwater, the take-out point for Ruby Canyon river runners. Interviewers contacted recreationists in the Rattlesnake Arches/Pollock Canyon zone (Zone 4) either at the Pollock Bench Trailhead or on the Black Ridge Road.

Data Collection

Data were collected in two phases. Phase one involved contacting Ruby Canyon-Black Ridge visitors on-site during a recreational engagement. A short interview was conducted to obtain preliminary information used, in part, to later check for non-response bias. In the second data gathering phase, study participants were mailed a larger questionnaire that asked in detail about their trip to the RCBR area.

On-Site Interview. Trained interviewers were instructed to systematically select individuals who were at least 16 years old. The interviewers first introduced themselves to the selected visitor and offered a brief explanation of the study. If the person was willing to participate in the project, the interviewer conducted the brief on-site interview that included questions about group size, group type, age, exit and entry points to the study area, and previous visits to the RCBR area. River runners who were beginning their trip down the Colorado River were also asked what type of water craft they used. To assist with phase two of the data gathering process, the names and addresses of the study participants were also obtained. Appendix B contains a copy of the on-site interview.

Mail-Back Questionnaire. The mail-back questionnaire served as the primary data gathering instrument. Visitors contacted on site were mailed a questionnaire approximately one week after the on-site interview. The questionnaire was 13 pages long and contained 20 questions that gathered data on the following areas:

(1) activity participation;

(2) time spent in each zone;

(3) the desirability and availability of 54 recreation-related benefits;

(4) the desirability of 29 recreation setting characteristics;

(5) potential problem encountered during recreation;

(6) the degree to which visitors opposed or favored possible management actions in zones 1, 3, 4, and 5;

(7) the desirability of services and facilities, and an opportunity to grade the BLM's performance in providing services and facilities;

(8) travel to and from the study area, including expenditures; and

(9) socio- demographic characteristics.

A copy of the question is provided in Appendix C.

Mailing methods suggested by Dillman (1978) were used to maximize the survey response rate. Northern Arizona University (NAU) personnel mailed questionnaires to study participants from Flagstaff as soon as the on-site questionnaires were acquired after an interviewing session in Colorado. The questionnaire packet included the questionnaire, a map of the study area, a cover letter explaining the study and thanking the person for his or her participation, and a postage paid-return envelope.

A postcard was sent to participants one week after the initial mailing. The postcard thanked them for their participation in the project and reminded them to return their questionnaire if they had not done so. Three weeks after the first mailing, a second questionnaire packet was sent to visitors who had not yet returned their questionnaires. A third mailing was sent to visitors who had not returned their questionnaire by the sixth week. This mailing was sent via certified mail in order to ensure delivery and to convey to the participant the importance of his or her input.

Of the 1,025 visitors contacted and sent questionnaires, 692 returned completed questionnaires for a response rate of 68%. Figure 3 shows the proportion of visitors who returned completed questionnaires by interview location.

Data Analysis. Data were entered into a microcomputer using dBASE III+ software and analyzed with microcomputer-based statistical software. Data files were imported into

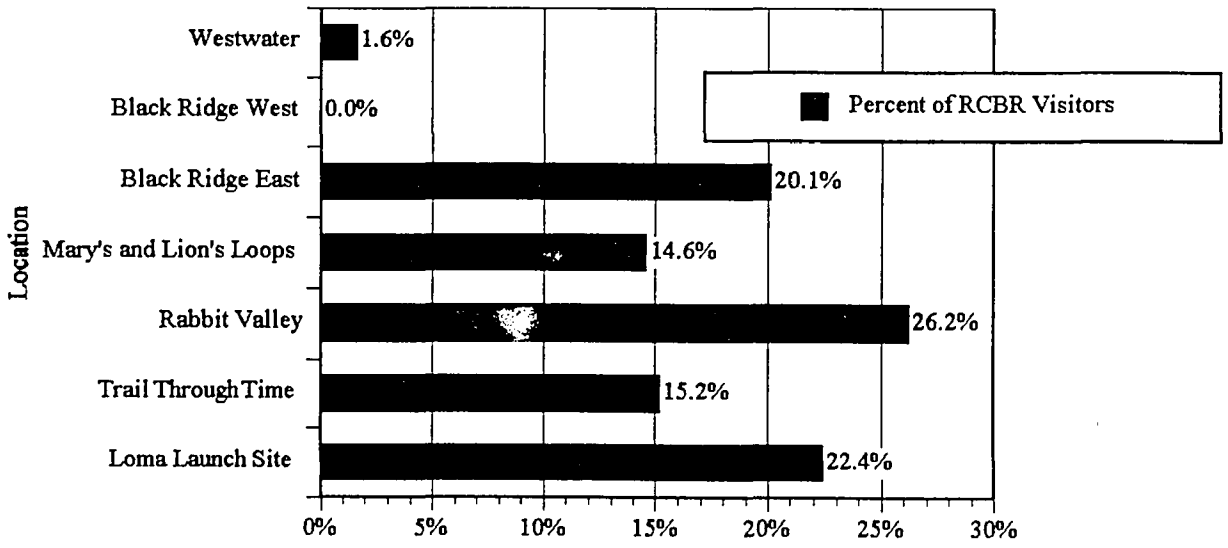

Figure 3 Interview Locations

SYSTAT (version 5) statistical analysis software program (Wilkinson et al. 1992). To detect any errors that may have occurred during the data entry, frequencies on all values for all variables were conducted and errors corrected. SYSTAT was used in subsequent data analysis.

The remainder of this chapter presents the results of the visitor. Results are presented in both tabular and graphical formats.

RESULTS

Socio-Demographic Characteristics

The majority of the study participants were white (96.4%) and male (71.2%). Figure 4 shows that only 3.6% of the sample was of an ethnic group considered to be a minority in the United States. Since minority participation in the activities most common to the RCBR area is low throughout the United States (Cordell 1990), these results are not unique to the study area.

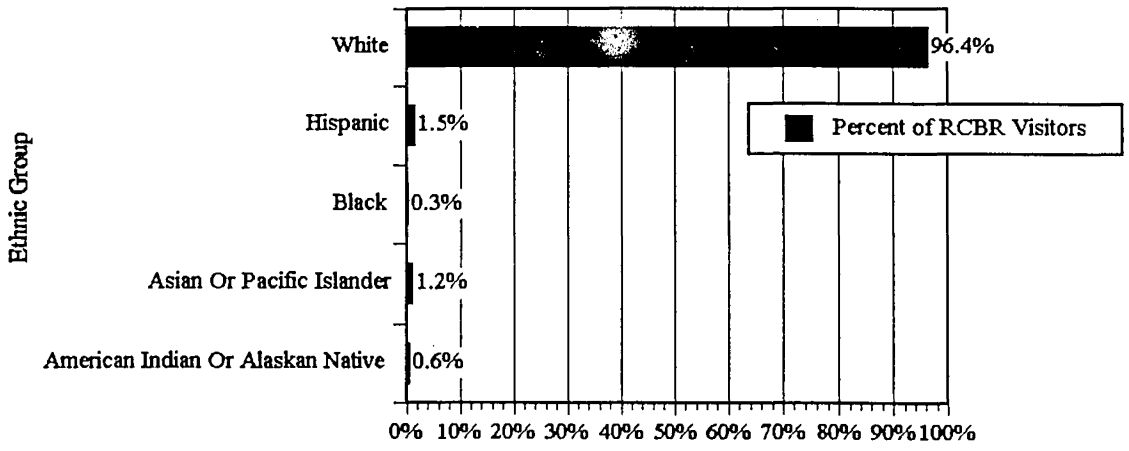

Figure 4 Respondents' Ethnic Group
n=658

As shown in Figure 5, more visitors listed married with children as their present life situation than any other category. Slightly more than 61% of the study participants were married and 47.4% of RCBR visitors had children. However, examining the social group visitors traveled with to the area (Figure 6) shows less than a third of the respondents visited the area as a family with children, two or more families or relatives together, or family and friends. Traveling with two or more friends was the most common social group using the area with 33% of the sample falling under this category.

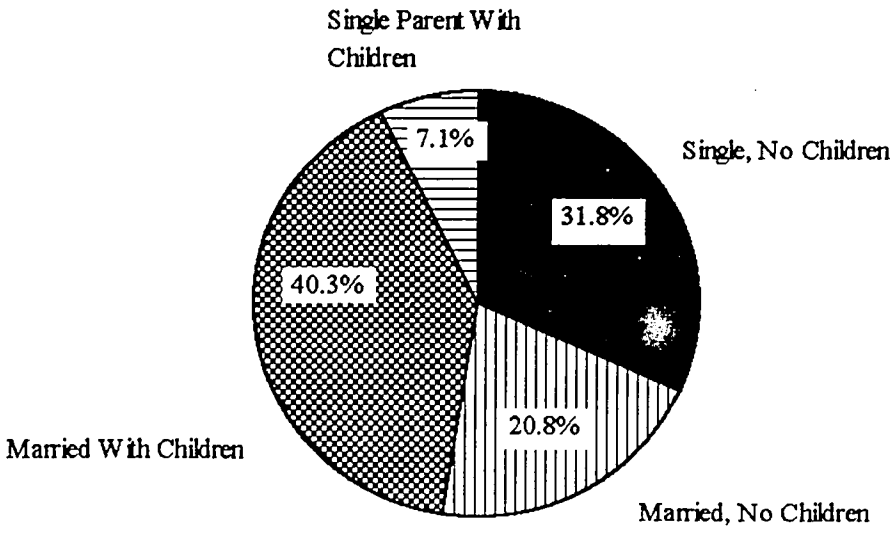

Figure 5 Respondents' Present Life Situation
n=677

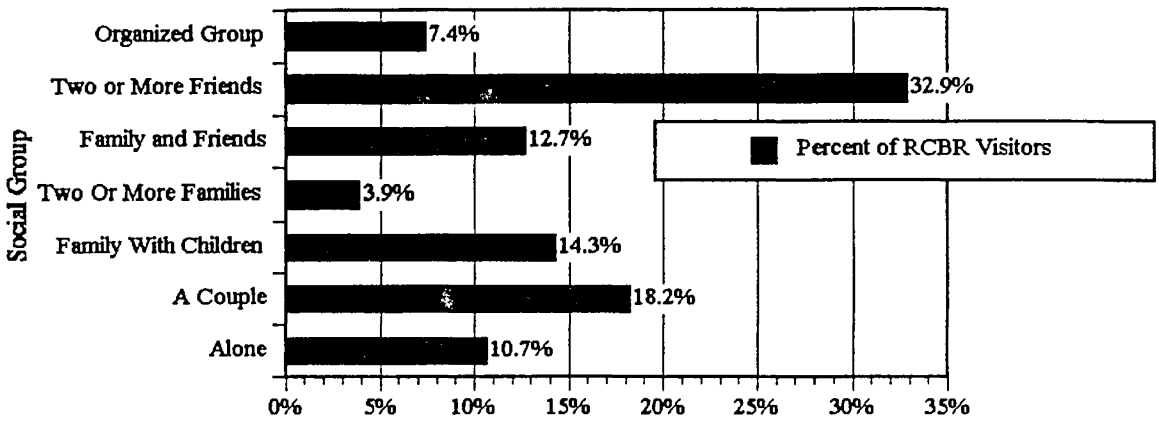

Figure 6 Type of Social Group
n=672

While the largest percentage of the study participants lived in the local Grand Valley area, Ruby Canyon-Black Ridge is also used by non-local visitors. As shown in Figure 7, more than one quarter of the visitors live outside Colorado and almost one third of the study participants live in Colorado but not in the Grand Valley area.

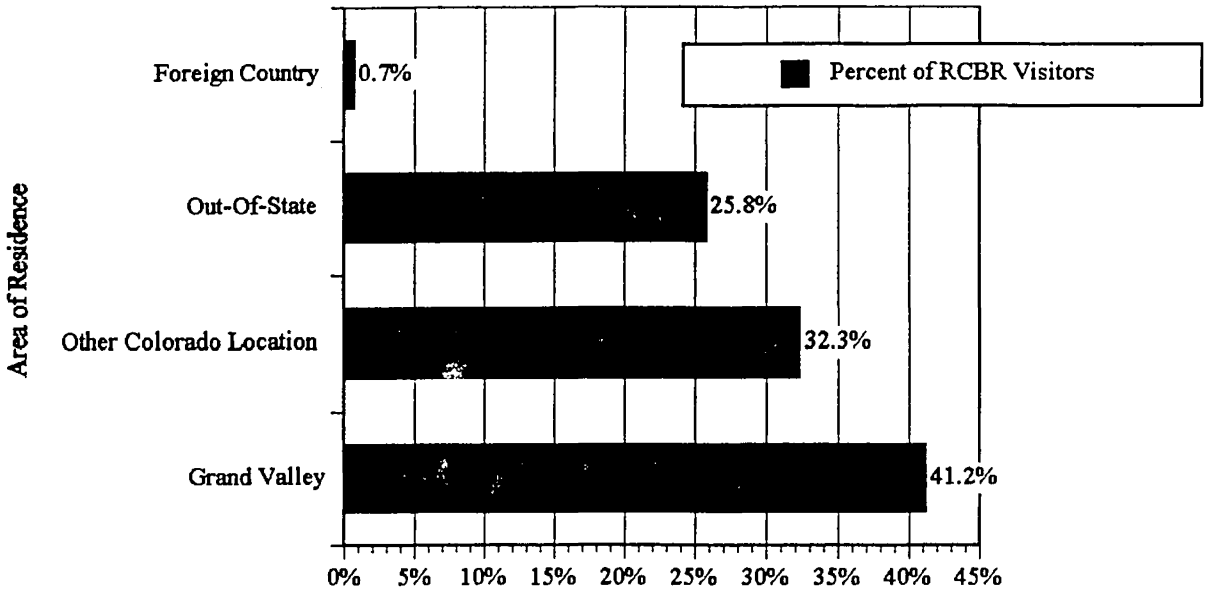

Figure 7 Area of Residence
n=691

The ages of RCBR visitors varied between 16 years-old and 87 years-old. The mean age of visitors was 40.4 years-old (Figure 8). The majority of visitors were between the ages of 20 and 49 (82.9%). Only 3% of the sample was younger than 20 or older than 70.

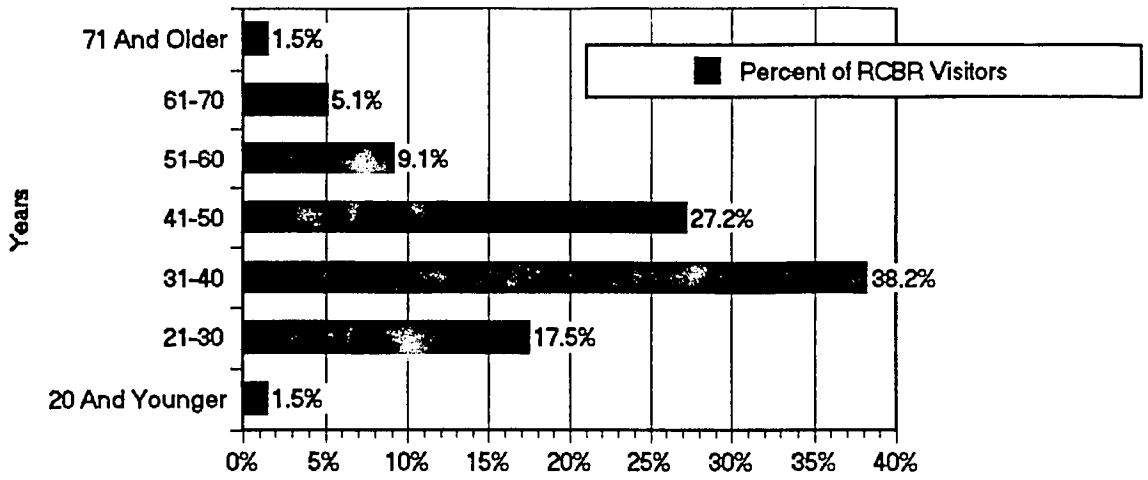

Figure 8 Visitors' Ages
n=684

Ruby Canyon-Black Ridge visitors tended to be fairly well educated with 87.7% of the visitors having at least some college education (Figure 9). Slightly more than one quarter of the study participants said they had a graduate degree while only 1.2% were not high school graduates.

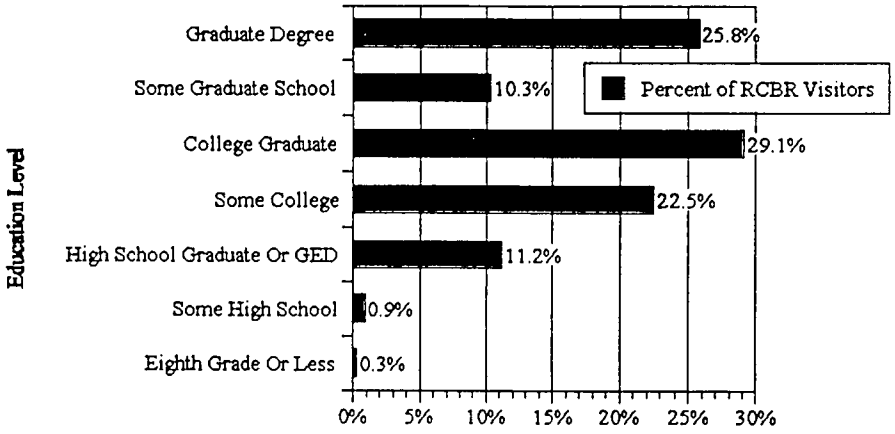

Figure 9 Respondents' Level of Education.
n=671

Most visitors tend to be in the higher to mid income brackets. As shown in Figure 10, a third of the visitors said they earned between $50,000 and $69,000, and a little more than 75% earned over $39,000.

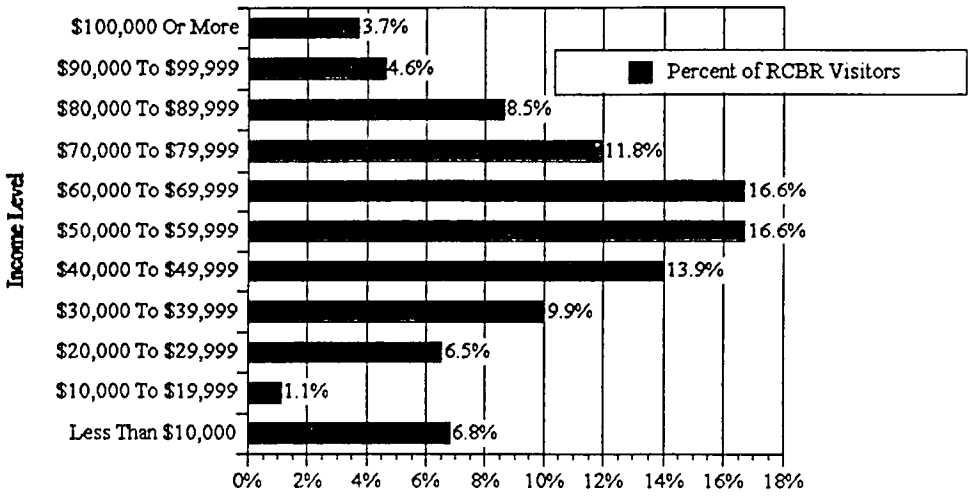

Figure 10 Respondents' Income Level.
n=648

Few RCBR visitors reported that members of their group had a disability (6.2%) interfered with his or her ability to enjoy or use the area.

When asked visitors were asked if it was their first trip to the area, a majority of them said they had been to RCBR before (57%). Almost half of those repeat visitors said they visited the Ruby Canyon-Black Ridge area nine or more times (Figure 11).

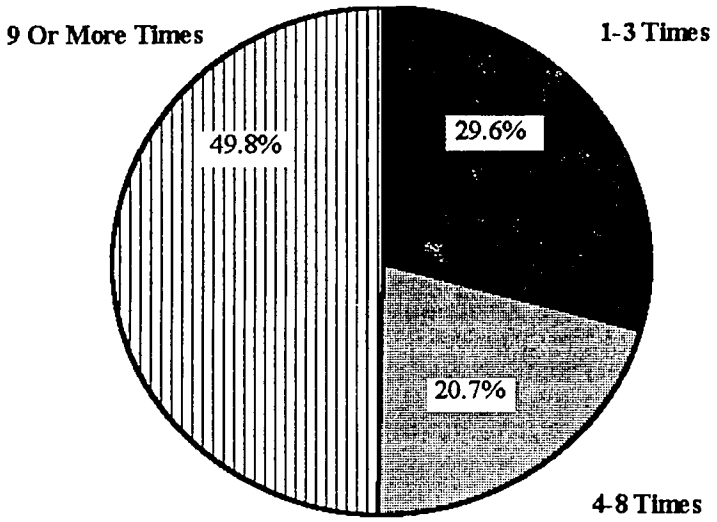

Figure 11 Number of prior visits
n=402

As shown in Figure 12, more than one-third of the visitors traveled to the area with two people (36.0%). Only 10.2% of RCBR visitors were travelling with one other person, but 11.3% had 11 or more people in their party. When asked the number of people travelling in their car, two people was most often mentioned (46.9%) (Figure 13).

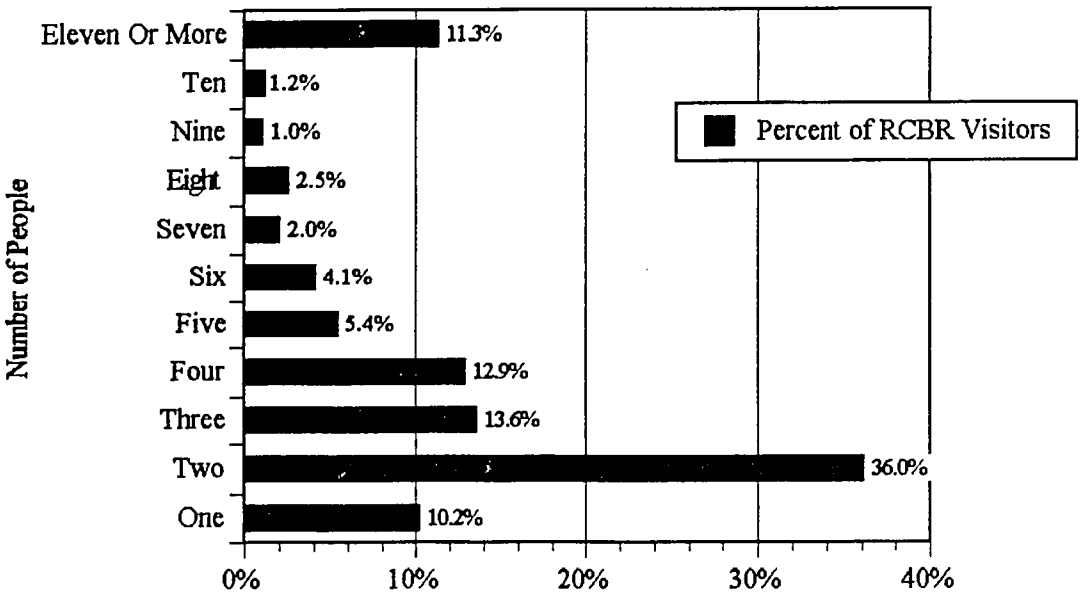

Figure 12 Number of People Travelled With
n=691

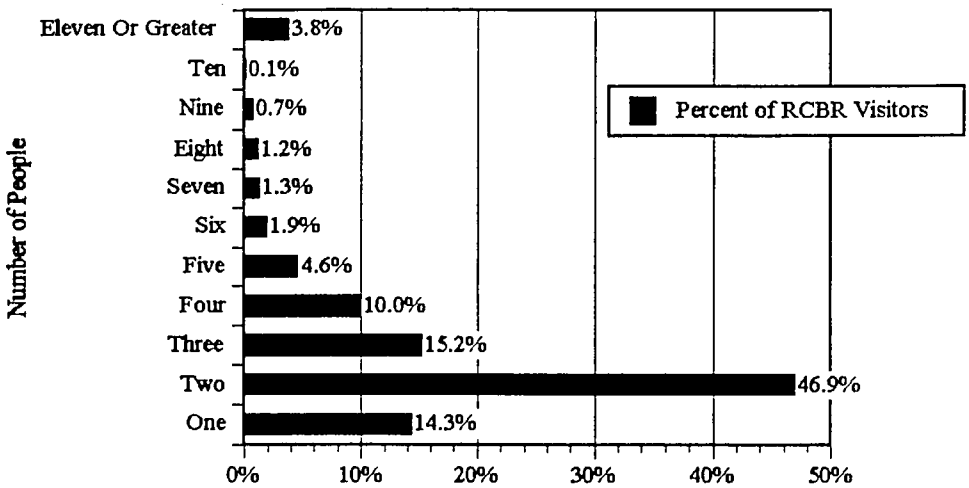

Figure 13 Number of People in Car
n=691

Table 2 presents the entry and exit points used by visitors recreating in Ruby Canyon-Black Ridge. Loma Launch Site is the most popular entry point (28.7%), used by river recreationists accessing the Colorado River and mountain bike riders using Mary's and Lion's Loops. The Interstate 70 on ramp at the Trail Through Time was most often listed as visitors' exit point (21.3%).

Visitors interviewed in Zone 3, Ruby Canyon/Colorado River, who were traveling down the river were asked the type of watercraft they used. Almost half of the river runners used a raft (49.6%) and 30.1% used a canoe (Figure 14).

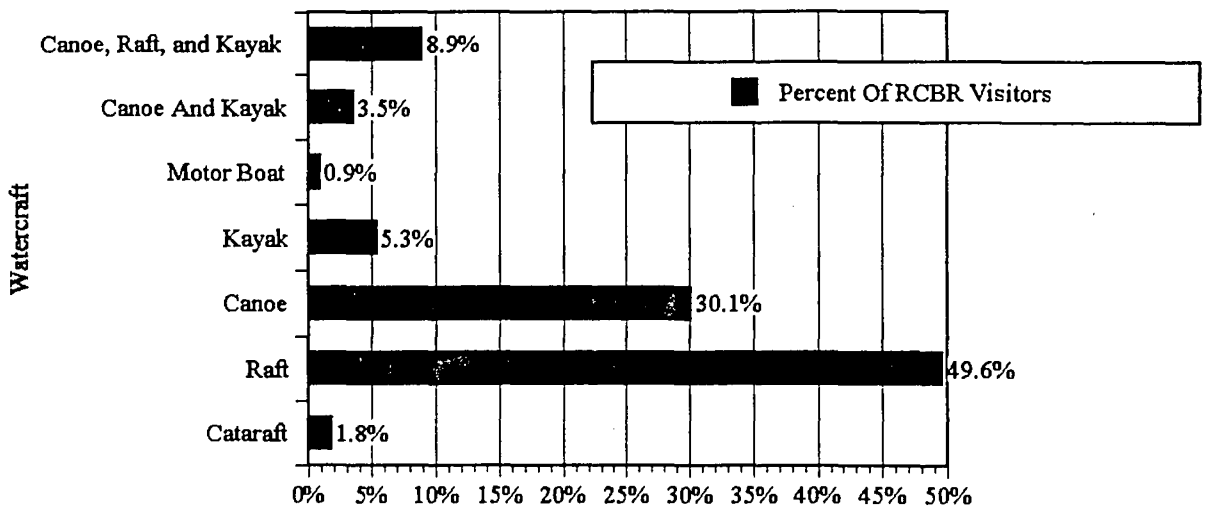

Figure 14 Type of Watercraft
n=113

Table 2 Entry and Exit Points

Entry Point	Percent[1]	Exit Point	Percent[2]
Loma Launch Site	28.7	I-70 (Trail Through Time)	21.3
I-70 (Trail Through Time)	20.0	Rabbit Valley	18.4
Rabbit Valley	19.7	Westwater	13.8
Pollack	6.9	Loma Launch	12.9
Black Ridge Rd. (East)	4.9	Pollack	6.9
Mary's Loop	4.9	Mary's Loop	5.6
Rattlesnake	4.2	Black Ridge East	5.4
Black Ridge East	4.2	Black Ridge Road	4.8
Moab	1.9	Cisco	3.3
Mack	1.2	Rattlesnake	2.9
Mary's/Lion's Intersection	0.5	Mack	2.0
Loma-Loveland	0.5	Book Cliff	0.6
32 Road Corn Lake #614	0.5	Moab	0.5
Fruita	0.3	Lion's Loop	0.3
Mary's Loop Turnoff	0.3	Mack - Lion's Loop	0.3
24 Road	0.3	Fruita	0.3
Pollack Road	0.3	Pollack Road	0.3
Mack-Lion's Loop	0.3	Fishford	0.2
Colorado National Monument	0.2	Mary's Loop Turnoff	0.2
Devils Canyon	0.2	Devil's Canyon	0.2
Dewey Bridge	0.2	Grand Junction	0.2

[1]n = 669

Activity Participation

Visitors were first asked to rate the amount of time they participated in each of 28 activities. The results to this question are presented in Tables 3 and 4. Table 3 presents the time spent by visitors who participated in each of the activities listed. Only visitors who said they spent time participating in a particular activity were included in the analysis. Visitors were then divided into groups based on the zone where they spent the most time. Table 4 presents time spent participating in activities by zone.

Table 3 Time spent participating in activities.

Activities	Percent who listed they spent:			
	1 hour or more	several hours	all day	more than one day
Camping near vehicle n=152	4.0	27.0	19.0	50.0
Sightseeing/driving for pleasure n=324	31.8	45.7	13.3	9.3
Camping away from vehicle n=112	10.7	21.4	0.0	67.7
Four wheel drive/ all terrain vehicle (ATV) driving n=126	21.4	47.6	17.5	13.5
Hiking/walking n=463	31.1	51.6	9.3	8.0
Motorcycling n=25	4.0	32.0	44.0	20.0
Mountain biking n=257	4.67	47.2	19.8	18.3

Table 3 continued

Activities	Percent who listed they spent:			
	1 hour or more	several hours	all day	more than one day
Motor boating n=9	11.1	11.1	11.1	66.7
Photography n=288	53.8	32.3	3.8	10.1
Jet skiing n=0	0.0	0.0	0.0	0.0
Partying n=100	27.0	42.0	8.0	23.0
Rafting n=98	1.0	8.2	10.2	80.6
Rock collecting/ prospecting n=95	48.4	29.5	11.6	10.5
Canoeing/ kayaking n=85	8.5	16.5	9.4	70.6
Hunting n=13	7.7	23.1	15.4	53.9
Fishing n=44	9.1	36.4	6.8	47.7
Nature study n=261	41.8	38.3	6.5	13.4
Swimming n=96	41.7	35.4	4.2	18.8

Table 3, continued

Activities	Percent who listed they spent:			
	1 hour or more	several hours	all day	more than one day
Crosscountry skiing n=10	0.0	60.0	20.0	20.0
Sunbathing/ beach activities n=106	29.3	46.2	8.5	16.0
Rock climbing/ bouldering n=135	40.7	43.0	5.9	10.4
Picnicking n=228	48.7	36.0	3.5	11.8
Watching wildlife n=325	42.5	34.2	8.6	14.8
Horseback riding n=45	6.7	22.2	22.2	48.9
Target shooting n=21	33.3	43.9	4.8	19.1
Viewing dinosaur fossils n=157	48.4	35.7	3.2	12.7
Viewing indian rock art n=151	48.3	35.1	6.6	9.9

Table 4 Time spent participating in activities by zone of most time spent

Activities	Percent who listed: Some Time Spent Participating					
	Entire sample n=692	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Camping near vehicle	28.7	34.8	12.6	33.3	25.6	80.0
Sightseeing/driving for pleasure	59.3	77.8	32.3	32.7	74.4	57.1
Camping away from vehicle	22.3	7.2	4.3	71.1	7.0	71.4
Four wheel drive/ all terrain vehicle (ATV) driving	24.9	24.2	10.6	13.9	46.3	16.7
Hiking/walking	78.5	88.5	43.9	84.4	85.9	0.0
Motorcycling	5.1	10.7	2.3	2.0	0.9	14.3
Mountain biking	45.4	32.4	93.0	13.1	45.7	33.3
Road biking	3.2	1.3	8.1	1.0	4.5	0.0
Motor boating	1.8	1.3	0.0	5.9	0.0	0.0
Photography	53.5	54.6	33.0	64.6	59.1	66.7
Jet skiing	0.0	0.0	0.0	0.0	0.0	0.0
Partying	20.0	12.5	12.9	39.8	13.9	85.7
Rafting	19.0	6.8	1.1	62.1	7.6	50.0
Rock collecting/ prospecting	18.8	26.8	6.4	20.6	11.2	42.9
Canoeing/ kayaking	16.8	3.2	1.1	62.0	5.2	33.3
Hunting	2.7	0.6	3.2	4.2	1.7	14.3
Fishing	8.7	2.5	3.3	26.9	2.6	14.3
Nature study	48.9	55.8	20.4	63.6	48.0	71.4

Table 4, continued

Activities	Percent who listed: Some Time Spent Participating					
	Entire sample n=692	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Swimming	18.9	9.3	6.5	58.8	2.6	42.9
Crosscountry skiing	2.0	0.0	1.1	2.0	5.2	0.0
Sunbathing/ beach activities	21.2	10.1	10.9	56.5	11.3	50.0
Rock climbing/ bouldering	26.7	23.5	14.9	34.6	32.2	71.4
Picnicking	42.9	37.0	24.5	69.9	39.0	71.4
Watching wildlife	60.0	56.3	36.4	83.2	61.5	87.5
Horseback riding	8.9	13.4	5.3	5.9	6.0	0.0
Target shooting	4.3	3.9	3.2	5.0	4.4	28.8
Viewing dinosaur fossils	30.1	58.2	7.4	16.5	15.3	16.7
Viewing indian rock art	28.9	42.5	2.3	44.7	16.2	33.3

RCBR visitors were also asked to identify their first, second, and third most satisfying activities. Mountain biking was the activity most often listed as visitor' most satisfying activity (31.4%) while more visitors listed hiking/walking as their second and third most satisfying activity (17.2% and 15.6% respectively). Tables 5-7 show these results.

Table 5 Most satisfying activity

Activities	Percent of RCBR Visitors[1]	Activities	Percent of RCBR Visitors[1]
Mountain biking	31.4	Photography	1.3
Hiking/walking	17.2	Wildlife watching	1.1
Rafting	7.8	Viewing indian rock art	1.1
Canoeing/kayaking	6.0	Viewing arches	0.8
Horseback riding	4.7	Rock collecting/prospecting	0.8
Viewing dinosaur fossils	4.7	Rock climbing/bouldering	0.7
Sightseeing/driving for fun	4.6	Wildflowers (viewing)	0.5
Four wheel drive/ATV driving	3.9	Camping away from vehicle	0.5
Camping near vehicle	2.5	Digging dinosaur fossils	0.3
Motorcycling	2.0	Target shooting	0.3
Nature study	2.0	Partying	0.3
Fishing	1.3	Other	4.1

[1]n=692

Table 6 Second most satisfying activity

Activities	Percent of RCBR Visitors[1]	Activities	Percent of RCBR Visitors[1]
Hiking/walking	17.2	Canoeing/kayaking	1.7
Sightseeing/driving for fun	10.8	Sunbathing/beach activities	1.5
Wildlife watching	10.4	Partying	1.5
Nature study	7.8	Fishing	1.1
Camping away from vehicle	6.4	Rock collecting/prospecting	0.8
Camping near vehicle	5.9	Horseback riding	0.8
Photography	4.9	Wilderness experience	0.8
Viewing dinosaur fossils	4.2	Motor boating	0.8
Mountain biking	3.6	Target shooting	0.6
Viewing indian rock art	3.2	Road biking	0.4
Picnicking	2.7	Motorcycling	0.4
Four wheel drive/ATV driving	2.7	Geology (geological study)	0.4
Rafting	2.1	Viewing arches	0.4
Swimming	1.7	Scenery	0.4
Rock climbing/bouldering	1.7	Other	3.4

[1]n=692

Table 7 Third most satisfying activity

Activities	Percent of RCBR Visitors[1]	Activities	Percent of RCBR Visitors[1]
Hiking/walking	15.6	Viewing dinosaur fossils	1.9
Photography	10.9	Rock collecting/prospecting	1.6
Sightseeing/driving for fun	9.3	Fishing	1.4
Wildlife watching	7.9	Sunbathing/beach activities	1.4
Nature study	7.2	Motorcycling	1.2
Picnicking	4.9	Canoeing/kayaking	1.2
Mountain biking	4.0	Motor boating	0.9
Camping away from vehicle	3.7	Target shooting	0.9
Viewing indian rock art	3.5	Rafting	0.7
Partying	3.3	Peace and quiet	0.5
Rock climbing/bouldering	3.3	Horseback riding	0.5
Four wheel drive/ATV driving	3.0	Scenery	0.5
Swimming	2.8	Other	5.8
Camping near vehicle	2.3		

[1]n=692

Visitors were grouped according to the zone where they said they spent the most time and an analysis performed on most satisfying activity. The ten most satisfying activities of visitors to each zone are presented in Table 8.

Table 8. The ten most satisfying activities by zone.

Activity	Percent
Zone 1 - Rabbit Valley - Trail Through Time (n=208)	
Hiking/walking	24.0
Mountain biking	17.8
Viewing dinosaur fossils	13.0
Horseback riding	7.2
4-wheel drive/All-terrain vehicle (ATV) driving	5.8
Camping near vehicle	4.8
Motorcycling	4.8
Sightseeing/driving for pleasure	4.3
Nature study	3.4
Viewing Indian rock art	2.9
Zone 2 - Lion's and Mary's Loops	
Mountain biking	86.8
Horseback riding	4.1
4-wheel drive/All-terrain vehicle (ATV) driving	1.6
Hiking/walking	1.6
Camping near vehicle	<1
Rock collecting/prospecting	<1
Hunting	<1
Picnicking	<1
Watching wildlife	<1
Road biking	<1

Table 8, continued

Zone 3 - Ruby Canyon/Colorado River (n=124)

Rafting	33.1
Canoeing/kayaking	29.0
Fishing	4.8
Mountain biking	4.8
Sightseeing/driving for pleasure	4.0
Watching wildlife	4.0
Nature study	2.4
Photography	1.6
Rock collecting/prospecting	1.6
4-wheel drive/All-terrain vehicle (ATV) driving	1.6

Zone 4 - Rattlesnake Arches/Pollock Canyon (n=134)

Hiking/walking	35.1
Mountain biking	28.4
Sightseeing/driving for pleasure	9.0
4-wheel drive/All-terrain vehicle (ATV) driving	5.2
Horseback riding	4.5
Camping near vehicle	2.2
Rock climbing/bouldering	2.2
Nature study	<1
Viewing dinosaur fossils	<1
Motorcycling	<1

Zone 5 - Mee, Knowles and Jones Canyons (n=8)

Camping near vehicle	12.5[a]
Rafting	12.5
Rock climbing/bouldering	12.5
Target shooting	12.5
Camping away from vehicle	12.5
Hiking/walking	12.5
Mountain biking	12.5

[a] Equal to one person.

Time Spent in Zones

To assess the amount of time visitors spent in each of the five management zones in the Ruby Canyon-Black Ridge area, study participants were asked to estimate the total hours they spent in each zone during the visit when they were contacted by the interviewer. Table 9 display the responses to this question. Only visitors who said they spent time in a zone were included in the analysis.

Table 9 Amount of time spent in each zone

	Zone 1 Rabbit Valley/ Trail Through Time	Zone 2 Mary's and Lion's Loops	Zone 3 Ruby Canyon/ Colorado River	Zone 4 Rattle-snake Arches/ Pollock Canyon	Zone 5 Mee, Knowles or Jones Canyon
n	318	206	195	194	43
Minimum (hrs)	0.5	0.5	0.2	0.5	1.0
Maximum (hrs)	144.0	96.0	98.0	94.0	36.0
Mean (hrs)	10.3	5.6	23.5	9.8	7.3

Visitors were also asked to indicate the zone in which they spent the most time. Figure 15 shows that the majority of visitors spent the most time in Rabbit Valley/Trail Through Time (Zone 1). Zone 5, Mee, Knowles, and Jones Canyons, had the lowest visitation among the five zones.

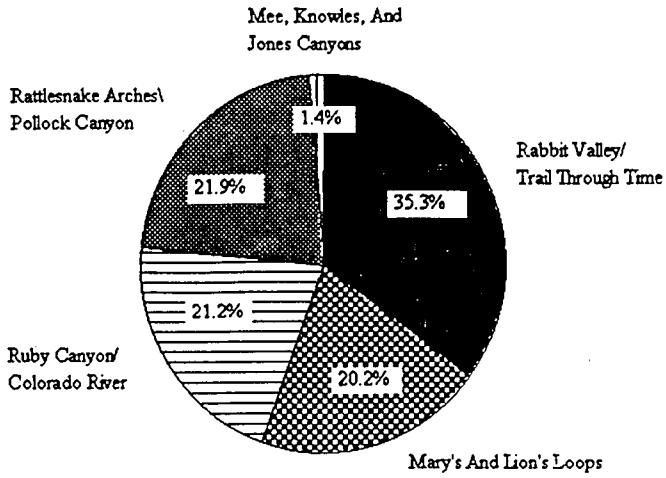

Figure 15 Zone of most time spent
n=657

Recreation Experiences and Benefits

Study participants were asked to rate how desirable they felt each of 54 experiences and benefits were as reasons for their visit to the Ruby Canyon-Black Ridge area and the extent to which they were able to obtain or realize each of the experiences and benefits. Responses to these questions are presented in Tables 10-14.

Table 10 presents visitor desirability scores for 54 benefits and experiences. Using a 5-point Likert response benefit desirability scale where -2 represented very undesirable and +2 corresponded to very desirable, *enjoy the natural scenery* was the most preferred benefit with a mean desirability of 1.9. Most of the benefits that related to escape or stress relief had high desirability ratings. The benefit *keep physically fit* also had a high desirability mean score of 1.6 *Observe other people in the area* and *have others know that you have been there* were the only two benefits rated as undesirable by the study participants.

Table 10 Experience and benefit desirability

Benefits and experiences	Mean[1]	n
Enjoy the natural scenery	1.9	661
Get away from the usual demands of life	1.7	637
Enjoy the smells and sounds of nature	1.6	650
Keep physically fit	1.6	641
Get away from crowds of people	1.6	635
Put me in a happier frame of mind	1.5	622
Be with members of your own group	1.5	640
Help you recover with everyday stresses	1.5	625
Experience new and different things	1.4	637
Do something challenging	1.4	627
Experience adventure	1.4	628
Help release or reduce built-up tension	1.4	645
Feel exhilarated	1.4	619
Rest mentally	1.4	629
Experience solitude	1.4	629
Experience excitement	1.3	631
Learn more about nature	1.3	637
Enjoy a place that is special to me	1.3	627
Feel more self-confident	1.2	621
Develop your skills and abilities	1.2	637
Learn more about the natural history of the area	1.2	659
Do things your own way	1.2	634
Enjoy a sense of timelessness	1.2	617
Improve my outlook on life	1.1	617
Be in control of things that happen	1.1	626
Reduce depression or anxiety	1.1	619
Feel more self-reliant	1.1	616

Table 10, continued

Benefits and experiences	Mean[1]	n
Feel at one with other living things	1.1	618
Maintain a sense of self-pride	1.0	634
Gain a more holistic sense of well-being	1.0	611
Develop or enhance your own environmental ethic	1.0	619
Help clarify my thinking	1.0	614
Gain a greater sense of independence or autonomy	1.0	618
Bring your family closer together	0.9	628
Reflect on and clarify personal values	0.9	629
Rest physically	0.8	636
Be with caring and sensitive people	0.8	621
Help others develop their skills	0.8	612
Learn more about the cultural history of the area	0.8	643
Maintain a desired image of myself	0.8	611
Share what you have learned with others	0.7	623
Lead other people	0.3	620
Talk to new and varied people	0.3	632
Chance dangerous situations	0.3	628
Escape the family temporarily	0.1	621
Express and nurture personal spiritual values and orientations	0.9	634
Avoid the unexpected	0.0	614
Enjoy a different temperature than what I experience back home	0.6	622
Experience a sense of personal freedom	1.5	620
Help maintain pride in my race or cultural subgroup	0.1	616
Do something creative such as sketch, paint, or take photographs	0.7	635

Table 10, continued

Benefits and experiences	Mean[1]	n
Be with other people who enjoy the same things you do	1.3	639
Observe other people in the area	-0.2	628
Have others know that you have been there	-0.3	633

[1] -2=Very Undesirable, -1=Somewhat Undesirable, 0=Neither or Not Applicable, 1=Somewhat Desirable, 2=Very Desirable

Ability to achieve experiences and benefits was assessed using a 4-point Likert scale where 1 corresponded to not at all able to obtain and 4 represented totally able to obtain. A mean "achievability" score was obtained for each benefit and are presented in Table 11. Results show that visitors were able to achieve the experiences and benefits they found most desirable. *Enjoy the natural scenery* received a very high score with a mean of 3.8. *Be with members of your group* and *get away from the usual demands of life* also had fairly high desirability scores as well as the second highest availability mean (3.6). In fact, all benefits had availability means of 2.2 or higher, which indicates that RCBR visitors were generally able to obtain their desired experiences and benefits.

Table 11 Visitors' ability to achieve desired experiences and benefits

Experiences and benefits	Mean[1]	n
Enjoy the natural scenery	3.8	644
Be with members of your own group	3.6	573
Get away from the usual demands of life	3.6	595
Keep physically fit	3.5	609
Enjoy the smells and sounds of nature	3.5	610
Rest mentally	3.4	570
Be with other people who enjoy the same things you do	3.4	568
Put me in a happier frame of mind	3.4	551
Help release or reduce built-up tension	3.4	589
Help you recover with everyday stresses	3.4	568
Experience a sense of personal freedom	3.4	559
Reduce depression or anxiety	3.3	481
Get away from crowds of people	3.3	595
Enjoy a place that is special to me	3.3	539
Feel exhilarated	3.3	541
Do things your own way	3.3	562
Experience adventure	3.3	562
Do something challenging	3.3	565
Experience new and different things	3.2	589
Experience excitement	3.2	564
Maintain a sense of self-pride	3.2	498
Develop your skills and abilities	3.2	560
Feel more self-confident	3.2	502
Feel more self-reliant	3.1	485
Be in control of things that happen	3.1	537
Experience solitude	3.1	575

Table 11, continued

Experiences and benefits	Mean[1]	n
Improve my outlook on life	3.1	503
Do something creative such as sketch, paint, or take photographs	3.1	479
Gain a greater sense of independence or autonomy	3.1	477
Enjoy a sense of timelessness	3.1	503
Develop or enhance your own environmental ethic	3.0	476
Rest physically	3.0	515
Learn more about nature	3.0	592
Maintain a desired image of myself	3.0	440
Bring your family closer together	3.0	455
Reflect on and clarify personal values	3.0	508
Gain a more holistic sense of well-being	3.0	470
Help clarify my thinking	3.0	488
Feel at one with other living things	3.0	501
Express and nurture personal spiritual values and orientations	3.0	496
Be with caring and sensitive people	2.9	473
Share what you have learned with others	2.9	455
Learn more about the natural history of the area	2.8	595
Enjoy a different temperature than what I experience back home	2.8	446
Chance dangerous situations	2.8	498
Help others develop their skills	2.8	438
Escape the family temporarily	2.7	372
Lead other people	2.7	387
Have others know that you have been there	2.6	415
Avoid the unexpected	2.6	405
Observe other people in the area	2.6	480

Table 11, continued

Experiences and benefits	Mean[1]	n
Talk to new and varied people	2.5	494
Learn more about the cultural history of the area	2.4	522
Help maintain pride in my race or cultural subgroup	2.2	315

[1] 1=Not At All Able, 2=Somewhat Able, 3=Moderately Able, 4=Totally Able

Tables 12 and 13 present visitors desires and ability to achieve the 54 benefits and experiences grouped according to the zone where they spent the most time. While visitors who spent most of their time in Zone 5 appear to be somewhat unique, it must be remembered that this subsample contained only nine visitors. These results, therefore, must be interpreted with caution.

Table 12 Experience and benefit desirability by zone of most time spent

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Develop your skills and abilities	1.1	1.6	1.2	1.2	1.9
Do things your own way	1.1	1.3	1.3	1.2	1.8
Be in control of things that happen	1.0	1.2	1.2	1.1	1.4
Chance dangerous situations	0.1	0.7	0.4	0.3	0.6
Bring your family closer together	0.9	0.5	1.1	0.9	0.6
Enjoy the natural scenery	1.9	1.9	1.9	2.0	2.0
Be with members of your own group	1.4	1.4	1.6	1.5	2.0
Be with other people who enjoy the same things you do	1.2	1.4	1.5	1.1	1.4

Table 12, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Learn more about the natural history of the area	1.3	0.8	1.3	1.2	1.3
Keep physically fit	1.5	1.9	1.4	1.6	1.9
Do something creative such as sketch, paint, or take photographs	0.7	0.4	0.9	0.8	1.4
Talk to new and varied people	0.3	0.4	0.5	0.2	-0.4
Observe other people in the area	-0.1	-0.1	-0.4	-0.4	-0.4
Experience new and different things	1.4	1.3	1.4	1.4	1.7
15. Learn more about nature	1.4	1.0	1.4	1.3	1.7
Rest physically	0.7	0.4	1.1	0.8	1.2
Enjoy the smells and sounds of nature	1.5	1.6	1.7	1.6	1.6
Experience excitement	1.1	1.2	1.4	1.4	1.7
Learn more about the cultural history of the area	0.9	0.5	1.0	0.7	1.0
Have others know that you have been there	-0.2	-0.3	-0.3	-0.3	-0.8
Maintain a sense of self-pride	0.8	1.1	1.0	1.0	1.4
Express and nurture personal spiritual values and orientations	0.7	0.9	1.0	0.9	1.7
Reflect on and clarify personal values	0.7	0.9	1.1	0.9	1.7
Help release or reduce built-up tension	1.3	1.6	1.5	1.4	1.9
Enjoy a different temperature than what I experience back home	0.4	0.7	0.7	0.5	1.3
Rest mentally	1.3	1.4	1.6	1.5	1.8
Get away from the usual demands of life	1.6	1.7	1.7	1.7	1.9

Table 12, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Experience solitude	1.3	1.4	1.5	1.6	2.0
Get away from crowds of people	1.6	1.6	1.7	1.7	2.0
Escape the family temporarily	0.1	0.3	0.1	0.0	0.7
Share what you have learned with others	0.7	0.7	0.8	0.7	1.2
Lead other people	0.3	0.3	0.4	0.3	0.8
Be with caring and sensitive people	0.8	0.8	0.9	0.8	1.3
Avoid the unexpected	-0.2	0.0	0.0	0.0	-0.1
Do something challenging	1.3	1.7	1.3	1.4	1.7
Feel more self-confident	1.1	1.4	1.1	1.2	1.2
Experience a sense of personal freedom	1.4	1.6	1.5	1.5	2.0
Help you recover with everyday stresses	1.4	1.6	1.5	1.5	1.8
Reduce depression or anxiety	1.0	1.2	1.2	1.1	1.9
Gain a greater sense of independence or autonomy	0.9	1.1	1.0	1.1	1.9
Feel more self-reliant	1.0	1.2	1.0	1.1	1.8
Gain a more holistic sense of well-being	0.8	1.0	1.0	1.1	1.6
Help clarify my thinking	1.0	1.1	1.1	1.1	1.7
Feel at one with other living things	1.1	1.1	1.1	1.1	1.6
Enjoy a place that is special to me	1.1	1.4	1.5	1.5	1.8
Experience adventure	1.2	1.6	1.4	1.5	1.9
Put me in a happier frame of mind	1.3	1.5	1.6	1.5	1.9
Feel exhilarated	1.2	1.6	1.4	1.4	1.9

Table 12, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Help maintain pride in my race or cultural subgroup	0.1	0.1	0.2	0.1	0.9
Develop or enhance your own environmental ethic	0.9	1.0	1.1	1.0	1.7
Help others develop their skills	0.7	0.8	0.9	0.7	1.4
Maintain a desired image of myself	0.7	1.1	0.9	0.8	1.3
Improve my outlook on life	1.0	1.2	1.2	1.1	1.9
Enjoy a sense of timelessness	1.0	1.1	1.3	1.2	1.9

[1] -2=Very Undesirable, -1=Somewhat Undesirable, 0=Neither or Not Applicable, 1=Somewhat Desirable, 2=Very Desirable

Table 13 Ability to achieve experiences and benefits by zone of most time spent

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Develop your skills and abilities	3.0	3.5	3.2	3.2	3.0
Do things your own way	3.2	3.4	3.3	3.3	3.4
Be in control of things that happen	2.9	3.2	3.1	3.1	3.1
Chance dangerous situations	2.5	3.1	2.8	3.0	2.6
Bring your family closer together	3.0	2.7	3.2	2.9	2.5
Enjoy the natural scenery	3.7	3.8	3.8	3.8	3.9
Be with members of your own group	3.7	3.6	3.8	3.6	3.7
Be with other people who enjoy the same things you do	3.3	3.5	3.6	3.3	3.3

Table 13, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Learn more about the natural history of the area	2.9	2.3	3.0	2.8	3.3
Keep physically fit	3.4	3.8	3.3	3.6	3.9
Do something creative such as sketch, paint, or take photographs	3.1	2.7	3.2	3.3	2.7
Talk to new and varied people	2.4	2.4	2.9	2.4	2.4
Observe other people in the area	2.5	2.4	2.8	2.5	2.6
Experience new and different things	3.1	3.2	3.2	3.2	3.7
15. Learn more about nature	3.1	2.7	3.2	3.1	3.4
Rest physically	3.0	2.9	3.2	3.0	2.9
Enjoy the smells and sounds of nature	3.5	3.5	3.5	3.3	3.7
Experience excitement	3.1	3.5	3.1	3.3	3.3
Learn more about the cultural history of the area	2.5	2.0	2.6	2.2	2.9
Have others know that you have been there	2.5	2.5	2.7	2.6	2.5
Maintain a sense of self-pride	3.1	3.3	3.3	3.2	3.2
Express and nurture personal spiritual values and orientations	2.9	2.9	3.1	3.1	3.6
Reflect on and clarify personal values	2.9	2.9	3.2	3.1	3.7
Help release or reduce built-up tension	3.3	3.6	3.4	3.4	3.8
Enjoy a different temperature than what I experience back home	2.7	2.8	3.1	2.7	3.3
Rest mentally	3.3	3.4	3.4	3.3	3.4
Get away from the usual demands of life	3.5	3.7	3.5	3.6	3.9

Table 13, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Experience solitude	3.2	3.2	2.9	3.1	3.3
Get away from crowds of people	3.4	3.4	3.0	3.2	3.3
Escape the family temporarily	2.7	2.8	2.9	2.6	3.2
Share what you have learned with others	2.8	2.8	3.0	2.8	3.4
Lead other people	2.5	2.6	2.8	2.7	3.2
Be with caring and sensitive people	2.9	2.9	3.0	3.0	3.5
Avoid the unexpected	2.6	2.5	2.8	2.4	1.9
Do something challenging	3.1	3.7	3.1	3.3	3.4
Feel more self-confident	3.1	3.4	3.2	3.3	3.5
Experience a sense of personal freedom	3.3	3.5	3.4	3.4	3.8
Help you recover with everyday stresses	3.3	3.5	3.3	3.4	3.7
Reduce depression or anxiety	3.2	3.3	3.2	3.2	3.8
Gain a greater sense of independence or autonomy	3.0	3.2	3.0	3.0	3.9
Feel more self-reliant	3.1	3.2	3.1	3.1	3.7
Gain a more holistic sense of well-being	2.9	3.1	3.0	3.1	3.4
Help clarify my thinking	3.0	3.1	3.0	3.1	3.4
Feel at one with other living things	3.0	3.0	3.0	3.1	3.4
Enjoy a place that is special to me	3.1	3.5	3.4	3.4	3.4
Experience adventure	3.1	3.5	3.2	3.3	3.4
Put me in a happier frame of mind	3.3	3.5	3.5	3.4	3.6
Feel exhilarated	3.1	3.5	3.3	3.3	3.3

Table 13, continued

Experiences and benefits	Mean[1]				
	Zone 1 n=232	Zone 2 n=133	Zone 3 n=139	Zone 4 n=144	Zone 5 n=9
Help maintain pride in my race or cultural subgroup	2.1	1.9	2.5	2.1	2.5
Develop or enhance your own environmental ethic	2.9	2.9	3.1	2.9	3.5
Help others develop their skills	2.7	2.8	3.0	2.7	3.4
Maintain a desired image of myself	2.9	3.0	3.1	2.9	3.4
Improve my outlook on life	3.0	3.1	3.2	3.1	3.3
Enjoy a sense of timelessness	3.0	3.0	3.3	3.1	3.2

[1] 1=Not At All Able, 2=Somewhat Able, 3=Moderately Able, 4=Totally Able

Cluster analysis was used to group experiences and benefits into related groups or domains. A hierarchical clustering procedure grouped the benefits into nine mutually exclusive experience and benefit domains based on how visitors rated the desirability of each experience and benefit item. These domains and the individual benefits that compose those domains are shown in Table 14. The desirability means for the domains and individual experience and benefit items are also included along with Cronbach's Alpha Reliability Coefficient. Cronbach's Alpha was computed for each domain to determine the internal consistency of the items within a domain. Two benefit domains were are not included in subsequent analyses because of low reliability coefficients. Domains that contained only one item were also not included.

Table 14 Experience and benefit domains and the individual experience and benefit items that make up the domains

Experience and Benefit Domains and Individual Experience and Benefit Items	Mean[1]	n	α^2
STRESS RELIEF/ FITNESS/NATURE APPRECIATION	1.6	650	.847
Enjoy natural scenery	1.9	661	
Get away from the usual demands of life	1.7	637	
Enjoy the smells and sounds of nature	1.6	650	
Get away from the crowds of people	1.6	635	
Keep physically fit	1.6	641	
Experience a sense of personal freedom	1.5	620	
Help you recover from everyday stresses	1.5	625	
Experience solitude	1.4	629	
Rest mentally	1.4	629	
Help release or reduce built up tension	1.4	645	
SHARE SIMILAR VALUES	1.4	650	.493
Be with members of your group	1.5	640	
Be with other people who enjoy the same thing you do	1.3	639	
ACHIEVEMENT/ STIMULATION	1.3	661	.884
Put me in a happier frame of mind	1.5	622	
Feel exhilarated	1.4	619	
Do something challenging	1.4	627	
Enjoy a place that is special to me	1.3	627	
Experience excitement	1.3	631	
Develop your skills and abilities	1.2	637	
Feel more self-confident	1.2	621	
LEARN NEW THINGS	1.3	664	.772
Experience new and different things	1.4	637	
Learn more about nature	1.3	637	
Learn more about the natural history of the area	1.2	659	
INDEPENDENCE	1.1	638	.762
Do things your own way	1.2	634	
Be in control of things that happen	1.1	626	

Table 14, continued

Experience and Benefit Domains and Individual Experience and Benefit Items	Mean[1]	n	α^2
IMPROVE MENTAL WELL BEING AND SENSE OF SELF	1.0	653	.928
Enjoy a sense of timelessness	1.2	617	
Feel at one with other living things	1.1	618	
Feel more self reliant	1.1	616	
Improve my outlook on life	1.1	617	
Reduce depression or anxiety	1.1	619	
develop or enhance your own environmental ethic	1.0	619	
Gain a greater sense of independence or autonomy	1.0	618	
Gain a more holistic sense of well being	1.0	611	
Help clarify my thinking	1.0	614	
Maintain a sense of self pride	1.0	634	
Maintain a desired image of myself	0.8	611	
INTROSPECTION	0.9	635	.867
Express and nurture personal spiritual values and orientations	0.9	634	
Reflect on and clarify personal values	0.9	629	
TEACH/LEAD OTHERS	0.7	637	.802
Be with caring and sensitive people	0.8	621	
Help others develop their skills	0.8	612	
Share what you have learned with others	0.7	623	
Lead other people	0.3	620	
MEET NEW PEOPLE	0.1	638	.765
Talk to new and varied people	0.3	632	
Observe other people in the area	-.2	628	

[1] -2=very undesirable, -1=somewhat undesirable, 0=neither or not applicable, +1=somewhat desirable, +2=very desirable

[2] Cronbach's Alpha Reliability Coefficient

Recreation Settings

A 7-point Likert scale where -3 indicated very undesirable and +3 corresponded to very desirable was used to measure visitors' desires for 29 setting characteristics that described different types of physical, social, and managerial setting qualities. These characteristics were grouped into six categories: 1) access to the area, 2) size and naturalness of the area, 3) distance from roads, 4) contacts with other people, 5) amount and type of facilities, and 6) amount of management or regulation. Each item described a characteristic of one of five Recreation Opportunity Spectrum (ROS) zones (i.e., primitive, semi-primitive, roaded natural, roaded modified, and rural).

The results provided in Table 15 indicate that visitors in general preferred settings that have little or no development. A few primitive and rustic facilities are desirable but large, natural-appearing settings are most desired. Visitors prefer to have very little contact with other people.

Table 15 Setting characteristic desirability

Setting Characteristics	Mean[1]	n
Access to the Area		
No motorized use is allowed, so area is accessible only by hiking cross-country	0.6	633
Accessible only by non-motorized trails, mountain bikes, on foot	1.3	636
Accessible on motorized trails and primitive roads (off-highway vehicles such as trail bikes, 4-wheel drives)	-0.2	625
Accessible by all vehicles	-1.7	630

Table 15, continued

Setting Characteristics	Mean[1]	n
Size and Naturalness of the Area		
An undisturbed natural area about 5,000 acres or larger in size	2.1	626
A largely undisturbed natural area between 2,500 and 5,000 acres in size	1.6	628
An area that is somewhat modified but appears natural. Land use activities such as livestock grazing may be evident. No particular size of area is needed	0.2	635
A substantially modified area with both man-made and natural features such as rural or agricultural landscapes. Land uses such as mining and water developments may be present	-1.4	627
An area where roads, buildings, and powerlines clearly dominate the landscape	-2.6	630
Distance from Roads		
Further than 3 miles from any road with motorized vehicles including motorcycles	1.2	627
At least 1/2 mile away from any road with motorized vehicles	1.2	626
near or on 4-wheel drive roads but at least 1/2 mile from roads drivable by cars	0.5	631
Near or on roads drivable by cars but at least 1/4 mile from highways	-0.8	619
On or near primary highways	-1.9	624

Table 15, continued

Setting Characteristics	Mean[1]	n
Contacts with Other People		
Very little contact with other people (see 6 or fewer groups per day, see less than 3 groups at your campsite).	2.2	645
Little contact with other people (see 6-15 groups of people per day, see 6 or fewer groups at your campsite)	0.9	625
Moderate contact with other people (see 15+ groups per day, fewer away from roads and developed sites)	-0.5	614
High degree of contact with other people (30+ groups per day, fewer away from roads and developed areas)	-2.1	615
In constant contact with other people (large numbers of users on site and in nearby areas)	-2.6	622
Amount and Type of Facilities		
No facilities	0.7	624
A few primitive facilities such as trails and signs	1.8	632
A few rustic facilities are provided to protect the environment and for visitor safety (e.g, tables and pit toilets)	1.2	633
Moderate number of facilities such as picnic tables, fire grates, parking areas	-0.4	617
Numerous facilities provided to accommodate many users (e.g., surfaced trails, developed campgrounds, stores)	-2.1	622

Table 15, continued

Setting Characteristics	Mean[1]	n
Amount of Management or Regulation		
No visitor management controls, regulations, or information facilities	-0.3	624
A few visitor management controls or regulations, are noticeable, limited information facilities are present.	1.1	633
On-site regulations and controls are noticeable, simple information facilities are present	0.5	617
On-site regulations and controls are numerous, more complex information facilities are present	-1.2	610
On site regulations and controls are obvious and numerous with sophisticated information exhibits present.	-1.8	617

[1] -3=Very Undesirable, -2=Moderately Undesirable, -1=Somewhat Undesirable, 0=Neither, 1=Somewhat Desirable, 2=Moderately Desirable, 3=Very Desirable

Desired setting characteristics were broken down by the zone where visitors spent the most time. The results of these analyses are presented in Table 16. Findings are similar to those found in analyzing visitors as one group. Visitors to Zone 1--Rabbit Valley/Trail Through Time were somewhat more tolerant of development and facilities than visitors to other zones, but the message of preferring natural-appearing, largely undisturbed settings with relatively few facilities and little contact with other visitors is clear from visitors to all five use zones. Results for visitors to Zone 5--Mee, Knowles, and Jones Canyons must be interpreted with some caution due to the very low sample size.

Table 16. Desired setting characteristics by zone

Setting Characteristics	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Access to the Area										
No motorized use is allowed, so area is accessible only by hiking cross-country	0.4	212	0.8	123	1.1	127	0.6	136	-0.1	9
Accessible only by non-motorized trails, mountain bikes, on foot	0.7	205	2.3	128	1.4	128	1.3	139	-0.4	9
Accessible on motorized trails and primitive roads (off-highway vehicles such as trail bikes, 4-wheel drives)	0.4	206	-1.1	122	-0.7	127	0.1	135	-0.1	9
Accessible by all vehicles	-1.0	208	-2.4	125	-1.7	130	-2.1	134	-2.1	8
Size and Naturalness of the Area										
An undisturbed natural area about 5,000 acres or larger in size	1.8	204	2.1	122	2.4	128	2.4	137	2.3	9

Table 16, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
A largely undisturbed natural area between 2,500 and 5,000 acres in size	1.6	209	1.7	125	1.6	124	1.9	134	1.0	9
An area that is somewhat modified but appears natural. Land use activities such as livestock grazing may be evident. No particular size of area is needed	0.5	211	0.2	124	-0.2	128	-0.2	135	-0.4	9
A substantially modified area with both man-made and natural features such as rural or agricultural landscapes. Land uses such as mining and water developments may be present	-1.3	204	-1.4	123	-1.4	127	-1.7	136	-2.0	9
An area where roads, buildings, and powerlines clearly dominate the landscape	-2.7	205	-2.7	123	-2.7	128	-2.6	137	-2.9	9

Table 16, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Distance from Roads										
Further than 3 miles from any road with motorized vehicles including motorcycles	0.7	205	1.5	123	1.8	127	1.1	136	1.7	9
At least 1/2 mile away from any road with motorized vehicles	1.1	205	1.6	123	0.9	125	1.4	136	1.1	9
near or on 4-wheel drive roads but at least 1/2 mile from roads drivable by cars	0.7	208	0.3	121	0.05	128	0.7	137	0.4	9
Near or on roads drivable by cars but at least 1/4 mile from highways	-0.3	203	-1.0	120	-1.4	125	-0.8	136	-0.7	9
On or near primary highways	-1.6	202	-2.2	124	-2.3	126	-1.7	137	-3.0	9
Contacts with Other People										
Very little contact with other people	2.1	213	2.1	124	2.4	132	2.2	139	2.3	9

Tabl;e 16, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Little contact with other people	0.9	205	1.2	122	0.8	128	0.9	134	-0.2	9
Moderate contact with other people	-0.4	202	-0.3	119	-0.8	126	-0.7	132	-1.3	9
High degree of contact with other people	-2.1	200	-2.1	119	-2.3	125	-2.2	135	-2.2	9
In constant contact with other people (large numbers of users on site and in nearby areas)	-2.4	203	-2.8	121	-2.7	127	-2.7	135	-2.4	9
Amount and Type of Facilities										
No facilities	0.2	204	0.5	120	1.4	129	0.9	132	1.9	9
A few primitive facilities such as trails and signs	1.7	210	2.1	125	1.6	127	1.9	136	1.7	9
A few rustic facilities are provided to protect the environment and for visitor safety (e.g, tables and pit toilets)	1.5	209	1.5	123	0.8	129	1.0	135	-0.2	9

Table 16, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Moderate number of facilities such as picnic tables, fire grates, parking areas	0.05	205	-0.3	120	-0.9	125	-0.8	131	-2.0	9
Numerous facilities provided to accommodate many users (e.g., surfaced trails, developed campgrounds, stores)	-1.8	202	-2.1	122	-2.5	126	-2.3	132	-3.0	9
Amount of Management or Regulation										
No visitor management controls, regulations, information facilities	-0.5	206	-0.2	121	-0.3	128	0.01	132	-0.7	9
A few visitor management controls or regulations are noticeable, limited information facilities are present.	1.2	211	1.4	124	0.8	128	1.1	133	-0.1	9
On-site regulations and controls are noticeable, simple information facilities are present	0.6	205	0.8	121	0.4	126	0.2	129	-0.4	9

Table 16, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
On-site regulations and controls are numerous, more complex information facilities are present	-1.2	202	-1.2	118	-1.3	124	-1.4	130	-1.4	9
On site regulations and controls are obvious and numerous with sophisticated information exhibits present.	-1.7	203	-1.8	120	-1.8	125	-1.9	132	-1.7	9

[1] -3=Very Undesirable, -2=Moderately Undesirable, -1=Somewhat Undesirable, 0=Neither, 1=Somewhat Desirable, 2 = Moderately Desirable, 3=Very Desirable

Problems and Management

In order to help managers discover problems perceived by Ruby Canyon-Black Ridge visitors, study respondents were asked to rank on a 5-point Likert scale (where 1=not a problem and 5=very serious problem), the extent to which they found each of 30 potential problems. Visitors were asked to assess problems in the zone where they spent the most time. The first 19 potential problems pertained to all zones, but the remaining 11 dealt only with Zone 3, Ruby Canyon/Colorado River. Only visitors who spent the most time in that zone completed that section.

Visitors did not have an average rating greater than 2 (indicating that visitors perceived that issue as at least a minor problem). However, Table 17 does show that visitors have the most concern over signage in the area. The issues *too few information signs where you entered the zone* and *vandalized or shot-up signs* had a mean of 1.8

Visitors who spent most of their time in Zone 3, Ruby Canyon/Colorado River said that *motorized watercraft on the river* was a minor problem giving it a mean of 2.3 which was the highest of all potential problems listed.

Perceived problems are broken out by zone in Table 18. The items listed that relate specifically to the Ruby Canyon/Colorado River zone are not repeated. However, responses by Ruby Canyon/Colorado River visitors to the first 19 generic problem issues are presented in the table.

Table 17 Problems encountered by RCBR visitors

Problem (all zones)	Mean[1]	n
Too few information signs where you entered the zone	1.8	661
Vandalized or shot-up signs	1.8	648
Too few visitor information brochures available about recreation in the zone	1.8	660
Litter	1.7	660
Seeing evidence of livestock grazing	1.7	651
Too few information signs within the zone	1.7	664
People riding 4-wheel drive/ATV vehicles	1.6	652
People riding motorcycles	1.6	647
Too few restroom facilities where you first entered the zone	1.6	665
Evidence of past campfires	1.5	649
Too few restroom facilities within the zone	1.5	657
Scenic vistas impaired by air pollution	1.5	659
Presence of human waste	1.5	657
Bad road conditions within the zone	1.3	661
Too few campsites	1.3	645
Deteriorated campsites	1.3	638
People having parties and being noisy	1.3	650
Your preferred campsite was occupied	1.2	631
People riding mountain bikes	1.2	651

Table 17, continued

Problems (In the Colorado River/ Ruby Canyon zone)	Mean[1]	n
Motorized watercraft on the river	2.3	157
Crowding at Westwater Ranger Station	2.1	157
Too many people on the river	1.9	158
Jet skis on the river	1.9	156
Crowding at Loma Launch site	1.8	157
River campsites too close together	1.5	156
Off-highway vehicles visible from the river	1.5	157
Not enough campsites along the river	1.5	156
Campsite locations not identified along the river	1.3	157
People fishing at the Loma Launch site	1.1	160
Nonmotorized watercraft on the river	1.2	157

[1] 1=not a problem, 2=minor problem, 3=moderate problem, 4=serious problem, 5=very serious problem

Table 18 Problems encountered by RCBR visitors, by zone where most time was spent

Problems	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Too few information signs where you entered the zone	1.9	218	2.0	128	1.6	136	1.7	140	1.1	9
Vandalized or shot-up signs	1.7	211	2.0	127	1.8	132	1.7	140	1.3	9
Too few visitor information brochures available about recreation in the zone	2.1	217	1.6	126	1.5	135	1.6	142	1.3	9
Litter	1.6	216	1.6	128	2.0	135	1.7	142	1.6	9
Seeing evidence of livestock grazing	1.5	213	1.9	125	1.9	135	1.6	140	1.9	9
Too few information signs within the zone	1.9	219	1.8	128	1.4	136	1.6	142	1.1	9
People riding 4-wheel drive/ATV vehicles	1.5	211	1.7	128	1.6	135	1.6	140	1.1	9
People riding motorcycles	1.7	212	1.7	126	1.6	132	1.3	140	1.1	9
Too few restroom facilities where you first entered the zone	1.5	219	1.7	128	1.8	136	1.5	142	1.0	9
Evidence of past campfires	1.4	211	1.2	125	2.0	135	1.5	139	1.8	9
Too few restroom facilities within the zone	1.5	215	1.5	126	1.4	135	1.5	142	1.0	9

Table 18, continued

	Zone 1 Rabbit Valley/ Trail Through Time		Zone 2 Lion's and Mary's Loops		Zone 3 Ruby Canyon/ Colorado River		Zone 4 Rattlesnake Arches/Pollock Canyon		Zone 5 Mee, Knowles, and Jones Canyons	
	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n	Mean[1]	n
Scenic vistas impaired by air pollution	1.3	219	1.5	128	1.6	134	1.7	141	1.4	8
Presence of human waste	1.4	218	1.3	127	1.7	134	1.5	142	1.6	9
Bad road conditions within the zone	1.3	220	1.1	127	1.2	135	1.6	141	1.0	9
Too few campsites	1.3	206	1.3	125	1.5	136	1.3	140	1.1	9
Deteriorated campsites	1.2	204	1.1	121	1.5	135	1.3	140	1.2	9
People having parties and being noisy	1.2	210	1.2	126	1.5	135	1.2	140	1.1	9
Your preferred campsite was occupied	1.2	201	1.0	121	1.6	134	1.1	137	1.2	9
People riding mountain bikes	1.2	211	1.0	127	1.2	135	1.3	140	1.1	9

[1] 1=not a problem, 2=minor problem, 3=moderate problem, 4=serious problem, 5=very serious problem

Visitors were also asked to rate the extent to which they opposed or favored a variety of possible management actions using a 7-point Likert scale (with -3 = very undesirable to +3 = very desirable). Visitors were asked to evaluate management actions directed specifically to the zone in which they spent the most time. Zones 4 and 5, Rattlesnake Arches/Pollock Canyon and Mee, Knowles or Jones Canyons were combined into one zone referred to as Black Ridge in this question, although the majority of visitors responding were from Zone 4, Rattlesnake Arches/Pollock Canyon. Table 19 presents results of this question.

Visitor responses to the management actions were mixed. Ruby Canyon visitors showed concern over motorized vehicles on the Colorado River by giving the management action *limit the horsepower of motorized motorcraft* the highest desirability mean (1.5). They also rated *restrict use of motorized watercraft on the river during the busy summer season* and *prohibit off-highway vehicle use within the river corridor except on designated routes* fairly high with desirability means of 1.2. Rabbit Valley and Black Ridge visitors did not favor any of the possible management actions listed.

Table 19 Visitor desirability of management actions specified by zone

Possible Management Actions in Rabbit Valley	Mean[1]	n
Provide more motorcycle/ATV riding opportunities in the Rabbit Valley area	-1.5	338
Improve the main north-south Rabbit Valley road to 2-wheel-drive standards	-1.4	335
Limit camping to designated areas in Rabbit Valley	0.0	327
BLM should conduct more patrols to assist visitors and enforce regulations	0.0	333

Possible Management Actions in Ruby Canyon	Mean[1]	n
Provide toilets along the river	-0.7	195
Restrict numbers of people using the river at any one time	-0.1	191
Limit the size of each group on the river	0.3	192
Limit the horsepower of motorized motorcraft	1.5	192

Possible Management Actions in Ruby Canyon, continued	Mean[1]	n
Restrict use of motorized watercraft on the river during the busy summer season	1.2	187
Prohibit motorized watercraft on the river	0.6	189
Prohibit upstream river travel	0.6	190
Prohibit upstream river travel during the busy summer season	0.6	185
Limit camping to designated areas along the river	-0.2	188
Use only campsites assigned in advance	-1.1	185
Prohibit wood fires altogether	-1.1	188
All wood fires only in designated areas	0.0	185
Prohibit off-highway vehicle use within the river corridor except on designated routes	1.2	190
Provide more parking near the boat launch	0.2	186
BLM should conduct more patrols to assist visitors and enforce regulations	0.0	189

Possible Management Actions in the Black Ridge Area	Mean[1]	n
Build more hiking trails in the Black Ridge area	0.0	205
Maintain the Black Ridge access road to be accessible by car and/or 2-wheel-drive truck	-0.8	206
Pave the Black Ridge access road	-2.0	205
Limit camping in the Black Ridge Canyons Wilderness Study Area to designated areas	0.1	207
BLM should conduct more patrols to assist visitors and enforce regulations	-0.3	207

[1] -3=very strongly oppose, -2=strongly oppose, -1=somewhat oppose, 0=neutral, 1=somewhat favor, 2=strongly favor, 3=very strongly favor

Services and Facilities

To understand which services and facilities Ruby Canyon-Black Ridge visitors desire, as well as visitor perceptions of how well the Bureau of Land Management is providing those services and facilities, visitors were asked to express their desire for 20 services and facilities. They were also asked to indicate how well they felt the BLM was providing those services facilities by giving BLM a letter grade (A, B, C, D, F, or DK (Don't Know)). Visitors desirability was obtained using a 7-point Likert scale (-3 = very undesirable to +3 = very desirable). The BLM's grades were converted to a number and a grade point averages (GPA) calculated for BLM performance in providing each service and facility. Results are presented in Table 20.

Visitors most desire that the arches and surrounding canyons be managed appropriately (a mean desirability of 2.3). They also desire *opportunities for personal freedom without too much restriction by managers.* BLM received high grades (over 3.0) for these two most desired services. Visitors gave the BLM very good grades for *BLM people in the area are friendly and hospitable* and *BLM people in the area appear professional and competent* with GPA scores of 3.6 and 3.5 respectively.

Table 20 Desired services and facilities and assessment of BLM performance

Services or Facilities[1]	Mean Desirability[2]	Grade Point Average[3]
Helpful and attractive information signs	1.0	2.5
Clean and attractive restrooms	0.6	2.1
Access roads in good condition	0.9	3.0
Telephone requests handled without delay	0.4	2.9
Managers are protecting cultural resources	1.5	2.8
A prompt response to your written request(s)	0.8	2.9
BLM people in the area appear professional and competent	1.7	3.5
BLM people in the area are friendly and hospitable	1.8	3.6
Your vehicle and other personal belongings are safe from threat of vandalism	1.9	3.0
Managers provide for your security by notifying you of natural hazards	1.0	2.8
BLM offices open during convenient times during the week	1.3	3.2
BLM offices open during the right hours each day	1.2	3.2
The opportunity to leave a message for managers after working hours on an answering machine	0.9	2.8
BLM managers who are sensitive to your wants and needs	1.5	2.9
Too many rules and regulations	-0.6	2.7
Able to find BLM personnel when you need to	0.9	2.3
Brochures and maps that clearly communicate information about available recreation and tourism opportunities	1.4	2.5

Table 20, continued

Services or Facilities[1]	Mean Desirability[2]	Grade Point Average[3]
Opportunities for personal freedom without too much restriction by managers	2.2	3.4
The physical quality of the river environment is maintained	2.3	3.2
The arches and surrounding canyons are managed appropriately	2.3	3.2

[1] n = 692

[2] -3=Very Undesirable, -2=Moderately Undesirable, -1=Somewhat Undesirable, 0=Neither, 1=Somewhat Desirable, 2=Moderately Desirable, 3=Very Desirable

[3] Grade Point Average based on A = 4, B = 3, C = 2, D = 1, F = 0

Trip Characteristics

Basic information regarding the visitors trip was also obtained in the questionnaire. The majority of RCBR visitors (71.2%) said that visiting the Ruby Canyon-Black Ridge area was the primary reason for their trip. In terms of transportation, 90.4% of the visitors used a private car or truck as their primary mode of transportation to travel from their home to the study area (see Figure 16). Six percent of visitors visited the area with an outfitter/guide.

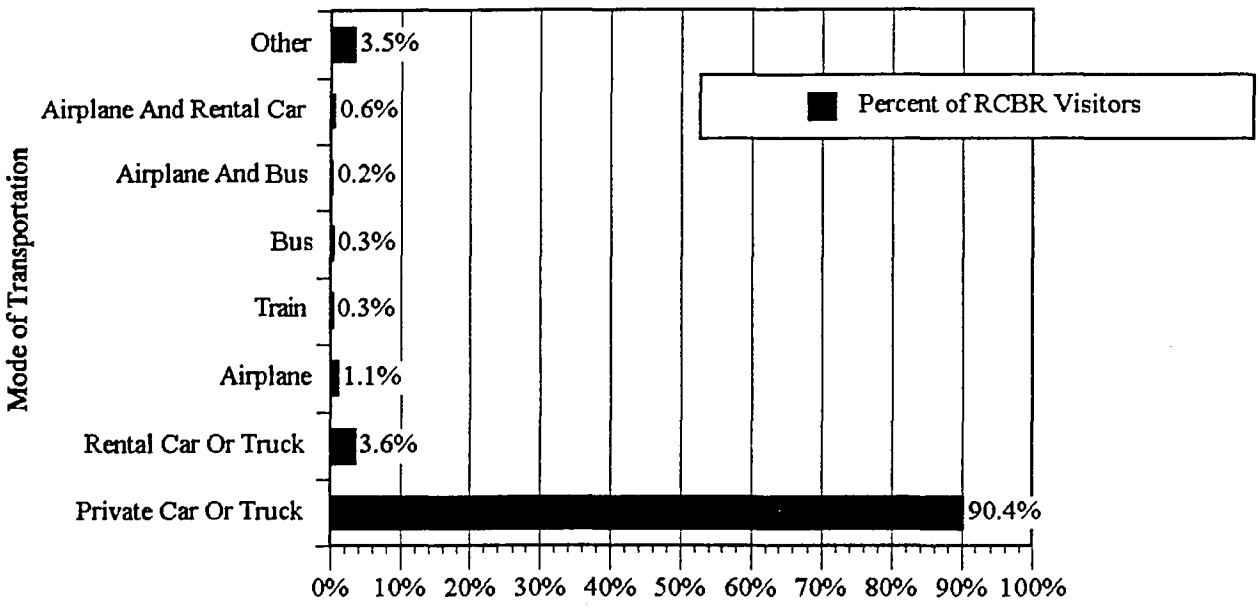

Figure 16 Primary mode of transportation used by RCBR visitors
n=665

To find out how RCBR visitors learn about the study area, study participants were asked to indicate the types of information they used to plan their visit. They were given a list of 14 sources of information, and visitors selected the appropriate responses. The percentages of visitors who used each source of information is provided in Table 21.

Table 21 Sources of information used by RCBR visitors in planning their trip to the area

Source of Information	Percent of RCBR visitors who used the information	n
Friends, relatives or others	62.6	661
Personal experience	49.0	661
Books, magazines or newspapers	16.5	662
BLM brochures	15.3	662
Mesa County/Grand Junction Tourism brochures	6.3	662
Colorado welcome center	3.8	662
Television or radio	2.4	662
Chamber of commerce	2.3	661
Travel agent or tour company	1.5	662
Colorado tourism board	1.5	662
Hotel or resort	1.5	662
Auto club	0.9	662
Airline/commercial carrier	0.3	662
Other	20.9	655

When asked if they stopped in Grand Junction as part of their visit to the RCBR area, 65.4 percent of visitors said they did. Those visitors who did stop were asked to provide an estimate of total amount of money they spent in restaurants/bars, retail stores, gift shops, gas stations, and outfitters and guides in the Grand Junction area. Figure 17 provides these results.

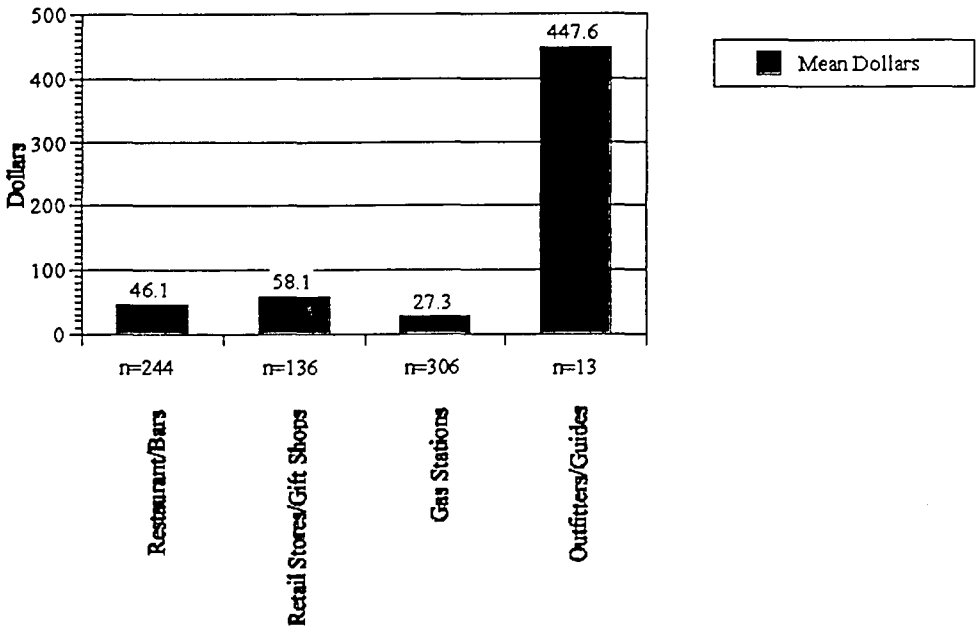

Figure 17 Expenditures in Grand Junction area businesses. Visitors who spent no money were not included in the analysis.

The last question regarding visitors' trip dealt with overnight stays in the area outside the RCBR study area. Only 43.7 percent of visitors said they stayed overnight in a location outside the study area as part of their trip. The total number of nights spent and the average number of dollars spent on overnight accommodations are presented in Figures 18 and 19, respectively. Those who spent no money in any of the expenditure categories weree not included in the analysis.

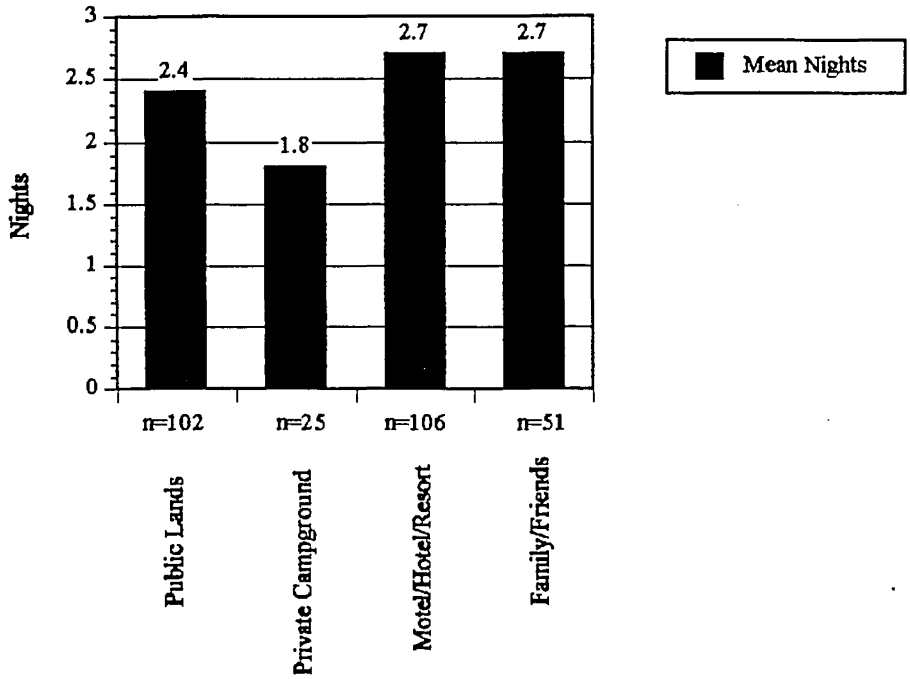

Figure 18 Average number of nights spent outside the study area. Visitors who spent no nights outside the area are excluded.

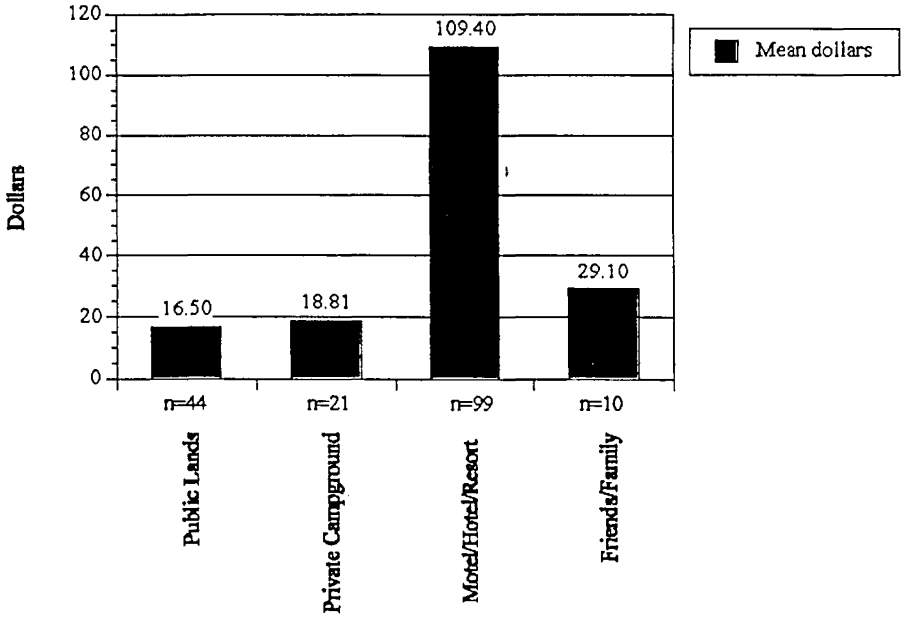

Figure 19 Expenditures for overnight accommodations. Visitors who spent no money are excluded.

Focus Group Interviews

METHODOLOGY

In May of 1993, BLM personnel identified 11 recreation user groups who use the Ruby Canyon-Black Ridge area. Names and phone numbers of group spokespersons to contact were supplied by the BLM. The Northern Arizona University research staff then contacted each spokesperson and explained a little about the project and asked if someone could meet with members of their group. The group spokesperson was asked to enlist ten to twelve members of his or her group to participate in the focus group interview. Due to low membership and similar interest in several groups, several user groups were combined for the focus group interviews. In these cases, each spokesperson was asked to provide members of his or her group.

The final eight focus group interviews included

(1) Colorado West Arabian Horse Club

(2) Museum of Western Colorado and Grand Junction Gem and Mineral Club

(3) Western Association to Enjoy Rivers (WATER)

(4) Sierra Club and Audubon Society

(5) Grand Mesa Jeep Club and Western Slope ATV Association

(6) COPMOBA (Mountain Biker Club)

(7) Colorado Archaeological Society

(8) Motorcycle Trail Riding Association

The NAU representative scheduled a time to meet with the groups in two conference rooms on the Mesa State College campus in Grand Junction to ensure a neutral meeting place. Each representative was contacted to verify whether members would be attending the

interviews. A letter was mailed to thanks members for participating and remind the group of the focus group interview date, time and place. Eight focus group sessions were held during the last two weeks of June, 1993.

An interview guide was developed that described the focus group interview process. Marty Lee, the principal investigator, conducted a focus group interview training session in Grand Junction for BLM and NAU personnel who would conduct the sessions. Tape recorders and note taking were used to record the discussions.

The sessionss began with the interviewer introducing participants to the concept of benefits so they had a frame of reference for discussion. They were than asked what individual benefits did they realize while recreating in the Ruby Canyon-Black Ridge area. The interviewer allowed the participants to talk freely, only speaking to clarify thoughts and keep them on the subject of benefits. After approximately 30 minutes of discussion and recording responses, the interviewer asked participants what they thought land managers could do to help them realize these benefits better and what they felt were the most important benefits they received from participating recreation activities in the RCBR area.

Data Analysis

When the interviewing was complete, the audio tapes were taken back to Northern Arizona University where they were transcribed to The Ethnograph qualitative data analysis software (Seidel et al. 1988). Using this software, the researcher organized data within the transcripted interviews into benefit categories. This chapter contains the focus group data from each interview and is listed according to benefits that were discussed. Responses tied

to specific study area zones are indicated where possible with initials of zones (e.g., RV =Rabbit Valley, TTT = Trail Through Time, etc.), and those statements that respondents mentioned were their most important benefits are indicated by a "*."

RESULTS

Archaeological Society Focus Group

History/Sense of the Past

The tie to the past, humans, animals, ecosystems, plants, depositional circumstances are all there as well.

The history of how this whole area developed.

Excursions provided us natural history instructions to us.

We get kind of a feeling of how the pioneers, Indians, the original peoples felt when they got to this country, and it makes you wonder what the pioneers thought when they came ...

It keeps you in touch with your ancestors, and the Native Americans and anyone who came before.

... and with your ancestors*

... getting in touch with your ancestors and Native American ancestors if you have any.

... through that culture to touch the past.

... it's an ideal prehistoric research area for the archaeologists

Freedom

...it gives me a tremendous feeling of freedom to just go out and look at these vast spaces.

... the experience of fresh air, the psychological feeling it gives us to know that we are free.

... a sense of the freedom and the space.*

Freedom of space ...*

I like the freedom and the beauty and the space*

... freedom ...*

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Individual Existence/Spiritual

I just wouldn't know how to exist without ... open country

I just love it out there... I just couldn't visualize living a life that you didn't have all that ground

It's medicine. It's just beneficial

You have a psychological awareness out here that you don't get when you're in a crowded place. You get in touch with your feelings. You get in touch with your thoughts. You know who you are.

All of these things are the spiritual ...*

Recharging through heavy sounds--wind, water, trees, plants all make heavy sounds. ... she requested that her cremated remains be scattered out there, so we did that.

General Learning

... learning in several aspects--nature, botanical, geological, archaeology, and history

(RV) ... a chance to broaden their horizons ...

... understanding ecosystems and the environment and the geological formations

I always enjoy going with my husband because he is so knowledgeable about so many things of nature

... excursions provided us natural history instructions to us ...

Feeling More Relaxed

Very relaxing.

Relaxation.

... for rest and relaxation.

... it gives me rest mentally.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

To Exercise

Exercising

To improve my physical conditioning by hiking and biking.

I like it for exercise.

We hiked a considerable distance which provided exercise.

Social Benefits

(RV) Dating opportunities - take somebody out for a hike. Marriage sites. Party, picnic and barbeque opportunities.

(BRE) A good chance to chat with everyone.

An opportunity to socialize and interact with my friends and family.

... I enjoy going with my husband... there is just something about our being together in that area that I really enjoy. And we've taken our children many times. We've also gone with friends ...

(RV) It is a good place to spend the day with them and get to know them.

To Discover New Things and Places

What will I discover on this trip?

I like the feeling that I may have been the first person who took this trail.

... for the curiosity to see the changing seasons, the landscape, and the colors.

Learn/Improve Skills

Developing my own personal skills in archaeology

... practice on the site on our archaeological skills

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

... to have to learn new skills and a better understanding of myself to be out there and be OK*

Escape

... escape this artificial environment that I live in five or six times a week.

(RV) In January when this valley is in an inversion and you can go out there away from that ...

Learn about Ecology

... understanding ecosystems and the environment and the geological formations.

Trees, shrubs, lizards a lot of collared lizards in Rabbit Valley, rocks, and geological formations

Benefits for Pets/Animals

My dog isn't real people-oriented. So she can just be free.

Improve the physical condition of the dogs ...

Access

It detracts from the natural beauty of nature when you got it open to everybody, and you open access.

(RV) ... seasonally it gives you a real easy access area during that time when the seasons change.

Challenge

... the challenge of it because it is a terrain that you have to understand to be OK out there ...

Happiness

(Arches-BRE)I think we got quite an emotional and psychological life out of that.*

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Creativity

... I like the subject matters it provides like for photography or painting. ... I have used the terrain and the desert area as a motif for some creative writing that I have done.

Environmental Benefits

... prevent worse conditions ... such as erosion from OHVs, ATVs, dirt bikes, overgrazing, mining, seismic exploration, gas development, trash from the hikers, rafters, and picnickers, vandalism to cultural resources.

Diversity

Everything's different on the BLM. That's the good thing about it. Over the ridge, there's something different over there.

They are here to see Colorado and they see totally different
scenery and totally different climate ...

(BRW) Mee Canyon has that big cave, and the rock formations are totally different there than where it widens out. Totally different kind of stuff.

Character of the Area

I like the exposure just to the sights and the sounds out there. I'm really fond of the desert areas.

... a lot of enjoyment when you go out and just see the sunset. From the sunrise, from the shadows. ... from a cup of cowboy coffee.

Part of the experience of the desert is the heat and the gnats and you've got to get out ... and experience the dust and the heat and all that ...

... everybody ... walks around in this heat and the dust ... you enjoy the dirt and the grime and the sweat and the smell of everything that's going on around you ...

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Jeep Focus Group

History/Sense of the Past

... being way up in the mountains where ... a hundred years ago those miners went up there with horses and timbers and set up mines. ... how those guys ever got that machinery up there.*

... there is a copper mine that was used in WWI and WWII. You are not going to find that on the road. ... You are sitting where some Indian sat hundreds of years ago.*

... most of the trails and roads ... have some basic history ... because of a cattle drive or some mining efforts ... so quite often we get some history of the area and ... its a learning process. (Learning)

We travelled the same trail part of the way where Chief Joseph led the Nez Perce Indian tribe and it was real interesting.

There is a lot of old history on some of those trails ... we jeep on some of those outlaw trails.

General Learning

Learning the areas for improved recreation, wildlife.

Feeling More Relaxed/Stress Relief

It relieves a lot of stress from just everyday living. ... One or two weekends [a month] you get out .. to enjoy and forget about everything else.*

... stress release ...

My main benefit is the relaxed feeling I get away from the city.

... the mountains ... a completely relaxed feeling.

I like to go out there and just relax.

... benefit I get is psychological, a mental release, just getting out away from people and doing something.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

It's relaxing ...

It ... is a very good tension reliever.

Exercise

Physical benefits, exercise ...*

Social Benefits

Being with my friends.*

Being with friends, seeing beautiful scenery ...

... meeting and talking with other users ...

Just being friendly. Asking ... where does that trail go or where have you been ...

... meeting new people and providing a good example.

When you are in a group and you enjoy the members of the group.

... kind of get a camaraderie with people of like minds.

Social camaraderie with other jeep club members. You can stop along the drive and chat, eat lunch together.

I like the camaraderie with the jeep club ...

... we like to share these trails with others we meet along the way, have a little conversation ... along with camaraderie with the club.

... I like the socializing aspect of it ... recreation that both my wife and I ...

... a group effort to keep it clean ... it makes you feel good.

(RV) I took my son there on his ATV ... I figured that it was a good place for him to ride.

(RV) ... they [children] learn how to drive a jeep responsibly and they learn camaraderie with the club. Quite a bit of jeeping is team work ... its a team effort ... if they are with the right group of jeepers it can be a real valuable experience.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

(RV) I have a 12 year old grandson ... we were teaching him to ride responsibly and how to take care of the equipment and respect the wildlife on the trail.

Discover New Things

... discovering new routes to ride.

... we try to choose a trail that loops around ... there is something about turning around and re-doing what you have just done, there is something new out there that you would like to see.

... you get a different perception when you go out and back on a trail.

I want to come out someplace I have never been before and then find my way home from there.

Going out there and seeing the sights that you won't see anywhere else.*

Getting out and seeing things that you would just not see ...*

... this area has given us the opportunity to get out again.*

... you can get the feeling that you are in there where someone else may not have been.*

Learn/Improve Skills

(RV) ... Rabbit Valley benefits the inexperienced drivers because there are not that many challenges.

(RV) ... learn how to drive responsibly ...

(RV) ... a good place for [my son] to ride.

(RV) ... we were teaching him to ride responsibly [12-year old grandson]

... improving my riding skills ...

... makes me a better jeeper ...

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Escape

(RV) ... getting away from people.

... when I get away from the city ...

I just like to get away from the city with all the problems ...

I like to get away from the city ...

... getting away from people.

... because of the openness, to get away from the crowds ...

Access

... we are able to get back in where hopefully there aren't a lot of people ...*

(RV) I ride this area in the winter. When I can't go anywhere else because of snow I go here.

(RV) It is a nice area that is close by ...

There are physical benefits you get from jeeping that you don't think is physical but it is.

Challenge

... motorized recreation is physically challenging.*

... I do like a technical challenge, I do like obstacles ..."

The more challenging the trail the more fun it is.

It makes it more challenging ...

...if you have a challenging trail that is going to self limit people going out there.

There is no challenge there. You can do most of it in your car ...

... it's not very challenging.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Environmental Benefits

They learn to respect the land. ... to benefit the land, how not to litter, stay on trails. We specialize in staying on the trail. We don't make new trails, we don't drive off the trails. ... we also apply a sort of peer pressure on the ones that do not respect the land.

Less impact on the land if you have loops [instead of retracing your steps].

... I think it is less impact ... its like a rerun somehow.

... we take care of the land ourselves. ... we leave no tracks, we stay on the road ... we always haul out bags and bags of trash ...

... group effort to keep it clean. ... it makes you feel good.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Arabian Horse Club Focus Group

Oneness With Nature

... a feeling of well being, feeling of joy at seeing the birds, seeing nature.

.. provides a place to renew your sense of oneness with the natural world and to reconnect yourself with the natural world ...

... exploring and being with nature.

... the communion with nature, being out in the open

History/Sense of the Past

...a sense of exploration, you can fancy yourself as another John Wesley Powell making your way around some rock outcropping ...

... an area where my roots are ... a place for reflection on the history of man ...

... you're out in an area where people lived hundreds and hundreds of years ago and it's so unique to find an arrowhead. .. people were here and it makes you wonder what kind of life they had ...

Freedom

... the freedom to do ...

... classifying that as a wildland it gives you a sense of space and freedom ...

... it's wonderful for the mind, to just get out free of civilization ...

I like the feeling of just being free from civilization ...

The open spaces, the openness and the freedom I feel.

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

Individual Existence/Spiritual

... a sense of self discovery ...

... this whole country is what makes living worthwhile.

... a place that allows for spiritual renewal ...

... there is certainly a spiritual aspect to being out in nature.

General Learning

I've learned alot about the area around Grand Junction ...

... the educational aspects because I see the need for that. I've taken my son out to see the glyphs and pictographs ...

I have a resource of a bunch of elderly men ... they are showing me the way things were done when they were out there driving horses ... how you do this and how you handle this situation ...
knowledge that will last a lifetime, knowledge that will never be there again.

(TTT) ... you see the dinosaurs and begin to realize there has been an awful lot of life out there .. it's fun when you are out riding when you see some plant or bird ... you've never seen before ... come back to the library and look it up.

... the Trail Through Time telling you about the dinosaurs ...

... condition myself and my horse for competitive trail riding ...

I keep learning a little bit more about geology all the time.

It's getting them to learn how much impact they have on an area without even knowing it.

..use that time to teach them what not to pick up. What isn't theirs to take home ... to pick it up and touch it, feel it and know that someone else chipped that corner out, ... to put it back down and just enjoy that you know its out there somewhere...

I usually haul a tree book and a mushroom book ...

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Feeling More Relaxed/Stress Relief

It provides rest ...

... it's more of a mental relaxation.

... feeling of relaxation.

... you can relax ...

Exercise

... exercise, ... for myself and my horse ...

Physical, both exercise for my body and my horses ...

It's just good exercise ...

(RV) ... exercise for ourselves and our horses.

(TTT) ... good exercise ...

Social/Family Benefits

I've taken my son out to see the glyphs and pictographs ...

It's a wonderful way to raise your kids ...

Social group gatherings, we have a lot of potlucks out there, fireside chats ...

Social, friends, picnic area, meet people out there, enjoy an area with friends ...

I like the socializing aspect of being out in these lands ... It's neat to run into somebody you know, many miles from town. ... the social thing is real nice.

... being with my friends.

It's been fun to show friends a different part of Colorado.

... you meet new friends out there. ... very entertaining.

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Discover New Things/Explore

...it's fun to go out there and explore and look for things...

... exploring ...

I go explore a lot of places ...I don't say now tell me where to go here.

Escape

... getting away from the work environment ... the telephone ...

Benefits for Pets/Animals

...a real good training and conditioning for the horse ... dogs, whatever to have some time out in a natural setting ...

... exercise for ... my horses, it gets them in shape ...

... exercising of the horse ...

Good training for your horses ...

... condition ... my horse for competitive trail riding ...

There is nothing more fulfilling than allowing this animal that spends five days a week in a corral the pleasure of getting out.

Access

... it's a wonderful place to go right from my back yard. For vacations you don't have to go far to see wonderful scenery.

... there is winter riding and it's close. It's easy to get to ... if you want a one day ride ...

There is really easy access to the area.

We have year round use which is nice.

It's nice access to the river. There are very few fences that you have to worry about.

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Challenge/Accomplishment

... good for people to get in situation where they have to totally rely on themselves and their own abilities ... you need to be dependent on yourself and you get out in these areas. If anything happens to you or your hoses there is nobody up here to see you through and that appeals to me very much.

Physically that land out there is a challenge ...it's a great feeling to know you can do it [be on your own]. Coming back and ... nurse you and your horse or your hiking partner is mentally satisfying as well as physically challenging. You can look back on it and say ... I really accomplished something.

It's a great psychological benefit to know that you passed through an area and left no trace of your presence.

I like to be real challenged by trails and you get all that out there.

Creativity

I am an artist by profession and it stimulates my creative juices being in this area.

Environmental Benefits

... the youngest one of three would pick up litter, sort of like stewardship of the land.

It's getting them to learn how much impact they have on an area ...

... to have them learn that one little tiny step can have a major impact ...

Character of the Area

... the scenery is one of the best things in this area. There are a lot of uses for everybody--bikes, those who hike, rafting ...

I like the clean air.

... there are just new ... every time you go out on an area ... you see a hundred different things ...

..the scenery is one of the best things in this area ...

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...the countryside out west of here is just gorgeous, probably the most beautiful in the whole U.S....

Lost Benefits

[from encountering litter] Psychological, stress level goes up instead of going down.

... we never encourage people to go into Rabbit Valley any longer because there is just too much use in such a small corridor ...

... established trails ... You don't have quite as much freedom to explore around ...

... watched this happen in Canyonlands, they have totally taken away any sense of self discovery ... here's a sign, here's a trail ...Let them find it on their own.

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WATER - River Runners Focus Group

Freedom

...I know I can do it when I want to do it, not when I get a permit to do it.

...being out here by ourselves, not regulated.

One word, freedom.

No kids, No makeup. You can just be whatever you want to be.

... you don't have to have a permit.

Individual Existence/Spiritual

...I used the time on the river for mental planning.

...there's also a big benefit from self-reliance, self-confidence. ... learning how to do things for themselves.

... you have your solitude for that 27 miles.

General Learning

... take your children down, bring your friends down, then you can educate them and it becomes a cultural value.

Feeling More Relaxed, Stress Relief

I just go for fun and just to get away and stress relief.

... it's relaxing ...

... seclusion, peace of mind.

To relieve stress.

Stress reducer.

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Gives me my own space, gives me time to cool off, physically and mentally.

... stress relief.

... loosening up ... just laying back and just floating and not having to deal with anything or anybody ...

... stress relief ...

Relaxation.

Stress relief.

Stress relief.

Exercise

I do it for exercise.

Exercise ...

Exercise.

Social/Family Benefits

... you can really get to know people ...

... the chance I'll meet someone from a different part of the country running the river ... I like to talk to them.

... it's a good time to socialize ...

... it's a really nice way to get to know people. They relax and loosen up ...

... it's nice going with some of your friends ...

When I take my children I find it's a good time to get close to my children. I enjoy giving them the experience in the outdoors

It's really gotten me enjoying her [daughter] and my family.

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It allows for quality, uninterrupted time with children.

... bonding that parents are able to have with their children ... parent is awarded a greater extended time with the child in those trips.

Learn/Improve Skills

She started going out being paranoid of every little wave.... It's really gotten her into it.

It's an area where the child can also ... be given control of the raft because it's not a dangerous part of the river. Children also get the benefit of learning how to hike ...

... it's a great stretch of river ... it's a great spot to teach them [kids]. ... it's a great spot to teach ... Introduce them to it [the river]

... you can take a bunch of kids on and not worry about them having to swim home.

Escape

... get away from people.

... get away where you just don't have to deal with people ...

It's a way to escape the urban setting, or even the suburb setting ... get away from it all.

Just to get away from the rat race.

... seclusion, peace of mind.

... away from regulations such as speed limits, permits, telephones, utility bills, ... getting away.

.. getting away from everything. Solitude.

I wish it were solitude.

... the solitude.

Great getaway.

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Learn About Ecology

I like the wildlife study, watching wildlife.

... sights and sounds of nature ... even a hawk.

Access

Doesn't take us long to get to it. ... to get back.

You can use it more frequently.

... accessible to the river people.

If it's tough to get in there, that means that the people who take the time and effort to get in there are going to have a special experience.

It's a hell of a lot easier to go from Pollack Canyon to Rattlesnake than it is to go from the river to Rattlesnake.

... if you want to go float a river at 5:30 in the afternoon, you just put your raft in.

... that's the method to get to places ... that other people can't get to.

Challenge

Challenge yourself.

... it's a challenge.

... it's beneficial as well as challenging for any novice canoer or kayaker.

... it was a lot more exciting for me ...

Character of the Area/Nature

It's private. For 28 miles there's very few other ways to get down and see that part of the river.

I like seeing the way the river changes all the time.

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... enjoy part of the scenery.

... the area is just breath taking ...

... the major is the beauty of it*

Nature.

Taste of catfish is a good one.

Environmental Benefits

... preservation of the environment through parental instruction about the fragility, how fragile the environment is ...

Learn to protect the environment.

... as time goes by trying to coach what that [litter] does, and especially seeing what other people's trash does. ... teaching them now how to take care of that, and how to watch their fires.

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Sierra Club/Audubon Society Focus Group

Freedom

It gives me a real sense of freedom.

Individual Existence/Spiritual

It's a great spirit renewer.

... spiritual renewal. I think that happens without even thinking about it.

I think relations of these animals and plants ... is a spiritual resource.

Good exercise that feels good and to be able to see the natural beauty. ... it all goes under the spirit.

... gives me a greater appreciation for all the resources ...

I like bird songs and when I think of all these songs and all these birds singing them I think of them as old friends.

... it gives me a sense of self reliance.

...my problems get so tangled sometimes that going out and having that sense of wonder gives me reason to go on. Inspiration to me.

... it provides great memories.

General Learning

... the scientific knowledge people gain out there.

(TTT) ... a lot of new information about dinosaurs is coming out of that area ... on an individual basis people are learning, discovering new things about dinosaurs. I learn, practice my birding, practice identifying plants, increasing my own scientific knowledge ... which will help me educate other people about it.

... we came to this ... entrenched meander ... I asked my brother, a geologist, how that developed. ... these places ... show you plenty of natural phenomena.

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Feeling More Relaxed/Stress Relief

... that lowers my stress level.

... find a place where i can go and relax.

Exercise

... physical fitness.

Great exercise.

.. feeling good you get as a result of exercise. ... it's really a wonderful feeling in my head. I just end up feeling good ...

Good exercise that feels good ...

Social/Family Benefits

Quality time with my wife and close friends ...

... with friends I haven't seen in a long time. .. we can catch up on our lives.

... taking other people out there .. gives them a greater appreciation for all the resources out there.

... maintaining communication with one's spouse ... when a crisis arises in a person's life, get the person most closely involved and take a long walk in a natural environment with them. I think its the best way to solve those personal problems.

...things you have to share with other people.

(RV) ... a group use area. That is where I would take a group of people.

... a place to be with friends.

... it's a good place to take kids away from their toys and their curling irons.

Escape

I need to get away from what's happening in town.

A chance to get away from it all ...

Getting away from civilization.

Solitude ... accessible solitude.

Access

... it is a nice place to get out early and in the season.

... you get in your car and drive for 15 minutes ... and you are out in the middle of nowhere.

(RV) I can drive into some of the areas here whereas I can't in some of the other areas. It is nice to have that kind of access ...

Challenge

... places that challenge myself and try to overcome that fear

Environmental Benefits

... it helps protect those resources.

Diversity

... the major benefit is the diversity. ... There are so many different things to do there, so many different places available ... a place where I can get all these experiences.

Benefits to the Group

... [access] allows us as an institution to be able to branch out into some different sort of things in education.

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Motorcycle Users Focus Group

Mental Therapy/Excitement

... you may be totally exhausted but mentally you're wide awake. And you feel good.

... mentally it gives me a high. It's like taking drugs without taking the drugs.

I'm concentrating on something to an extreme ... any sport that I got into and enjoyed has been something where you have to really concentrate.

it's a form of therapy ...

therapeutic value.

The high more than anything ... you get addicted to it. It's adrenaline ...

... the adrenaline gets to flowing and it gives you a high that's different than anything else. ... It's something that you really enjoy once you've gotten it.

Feeling More Relax/Stress Relief

... is just something that's relaxing.

It helps me to relax too.

Relaxation.

This just is a relaxing pleasure.

I work pretty stressful in my job. And I'm pretty high strung to begin with. ... when I'm riding, you have to concentrate on whatever you're doing to the point that you forget everything. ... it's probably been one of the best things for me stressfully, keeping stress under control ...

Exercise

... you get some good exercise.

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The exercise.

... most definitely it's one of those very vigorous exercises.

Social/Family Benefits

(RV) It seems like a real good place to teach people how to get along. It's a neat area to squeeze them [motorcycle riders] together and have them get along. Ten years ago it wasn't like that.

It's a good way to spend time with my family. We get to help each other out ... on the trail.

... it keeps you out of trouble, like for kids. Instead of wanting to go get in a gang ... you can go ride your motorcycle instead, you have something to go do.

Discover New Things and Places

I've found two of the five located sites of pictographs/petroglyphs in McDonald Creek. I want to find the others eventually.

It's a bit like putting notches on your fun. ... you see another great pictograph and take a picture of it. ... and you add another arch to it.

I saw four new arches which I can't ride to. I got great pleasure in walking to these arches.

I enjoy seeing new things ... Just seeing things different that I haven't seen before. ... every area that I can go, I've never been, is a thrill.

I like wildlife. I like to look. ... seeing animals in country different that I haven't seen. Every time I see something new is something more enjoyable.

Escape

Gets me out of the house.

... a relief from fixing things at home.

... a change from watching TV or hearing how the world goes on.

Being away from home ...

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Access

... you get to see so many pretty sights and stuff and on a motorcycle where I would be too lazy to go any other way ...

(RV) ... it is a real easy place to come and send people.

... one rides a quad, one of them rides a motorcycle, that's all that can get into places like that. For them it's very beneficial because they can go places.

(RV) It's also a good easy place to tell people how to get to.

(BRE) It's equally easy to sent them into that Rattlesnake parking lot.

... simple, easy access to many interesting, natural, and historical features.*

... it is also an inexpensive means of transportation to these places not readily accessible by car.*

Character of the Area/Nature

(BRE) ... the enjoyment comes from the walking and seeing the wind and erosion sculptures ... see a collared lizard and get a picture of him ... it's just a pleasant feeling.

Just enjoying the beauty of the desert.*

(RV) There are some special features with the valley. It's also a sandy soil so on a rainy day you can still ride motorcycles down it.

Sense of Ownership

I've been up in that area for so long ... I know it all pretty well. ... when you put time in on building the trails ... you get a feeling of ownership after that. There's a real feeling of ownership and there's a real comfort level for me in the valley because I know it so well.

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Mountain Bike Focus Group

Freedom

You can move at your own speed, do what you want to do how you want to do it when you want to do it.

... freedom for me to experience a natural setting the way I desire.*

Individual Existence/Spiritual

Enjoyment, peace of mind, closeness of ___ with myself.*

I like being out there by myself ... I like to do things my own way and that includes taking the trail that I want.

... when I show up [at work] with a smile the next day because of maybe going mountain biking it's a big benefit.

... setting goals and then achieving them.

... bonding with your mind, spiritually, getting more in touch with yourself, helps me think ...

... it gives you time to reflect on yourself and commune with God or whatever spiritually moves you ... when you get back to raw nature as it was created, it's an experience you can't get anywhere else and its important to have places like that.

Solitude, peace of mind, be at one with nature.*

... peace of mind ...

... experience the peacefulness.*

Peace of mind, solitude.*

Feeling More Relaxed/Stress Relief

... that gives me a chance to relax.

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... it's a place with the ability to sit down and watch the sunset and just smell the sage next to me. That comes out in my ability to relax.

Exercise/Health Benefits

... the physical side of it ...

... benefits to mountain biking are exercise ...

... to get the exercise.

... to burn energy, physical exertion ...

... it's good exercise ...

Exercise ...

Social/Family Benefits

... you want to be with your girlfriend or wife ... a little closer to your spouse.

... you learn how to talk to people while you're riding your bike.

... bonding with your family or whoever is with you. It's a certain closeness you develop.

I enjoy riding with my friends, meeting people on the trails.

... it brings people together ... people talk together better, people that never get along are buddies, it's an amazing sport.

... with my girlfriend ... I show up with a smile the next day because of maybe going mountain biking ...

... that's a good place for everybody to go and have private bonding.

That's a real important thing, meeting people, this sport is so social and you underestimate the value of that.

The social part, meeting people is important ...

... spouse or friends for companionship ...

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Escape/Seek Solitude

... you go ride in these areas to get away from the noise and the hustle and bustle of the city ...

I don't enjoy doing this activity amongst a crowd and if a crowd was there I would probably wouldn't go there.

It's a real big benefit to ride in an area where there are not a hundred other people, there's not big signs pointing this way, there's no trash cans, it's a real undisturbed area.

If there were large crowds there none of us would go there.

... with road riding you've got the cards, here you just have to deal with lizards and snakes.

This is a nice place for solitude ...

Solitude ...*

Challenge

... challenge of achievements, going out there and doing a good ride, a hot ride, also fulfilling personal goals and records both physically and emotionally.

(L&ML) ... there are biking trails along the river that are closed to motorcyclists. A benefit of going as fast as you can.

Character of the Area

... being in a place where there are no structures, buildings, businesses, housing, people ... it hasn't been bulldozed, it's still a rock a rock and a mountain is a mountain.

... it's a place that's very sparsely populated ...

... a lot of people here live in this area, sacrifice gains, careers or professions just for the ability to be accessible to all this that's going on.

... that area is undeveloped ... it's unique to have that single track ...

... it's a very clear air area ...

(RV=Rabbit Valley, TTT=Trail Through Time, BRE=Black Ridge East, BRW=Black Ridge West, BR=Black Ridge

... the lack of people, the lack of facilities.

(RV) ... there's such a variation in terrain in a small area. Kokopelli's is fairly open and different pockets of benefits ...

(BRE) ... up on Black Ridge road you've got more of a feeling of being in the mountains.

Sense of Ownership/Stewardship

I know if I see junk on the ground .. if I can carry it I take it out and that gives me some satisfaction.

I'm choosing to follow that trail instead of riding through the bushes and tearing the place up. Making that choice, I feel good about it. ... I feel better about myself, that I have taken care of the place, that may want to show it to a friend ... it's a great place to share ... I get a nice feeling of having some personal responsibility for.

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Gem and Mineral Club Focus Group

Freedom

(RV) ... it's just a little of our free spirit left. I think [Rabbit Valley] is great for those that are handicapped and can't go places that we used to go.

... it's very important for a person to have the ability to go out and see nature and rock, wilderness and not be impeded by rules and regulations ...

Individual Existence/Spiritual

(RV) there are actually a couple of places in Rabbit Valley I can actually communicate with the Lord.

... to expose myself to all that is natural ...

General Learning

... learn a little more about archaeology or geology.

Learn about my environment.

Sometimes I learn things that are so insignificant that I don't remember them when I get home, other times I remember a lot.

We study the flora and ...

I like to look at these areas and try to learn more about the nature of the rocks, structures, etc. and I can observe the Indian cultures, the pictographs and petroglyphs ...

... the more he takes school kids out there ... the less likely, at 21, to be packing that dinosaur bone illegally ...

... the educational advantages for myself and many other people, I think that it's one of the things land managers should encourage.

... the educational value ...*

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Feel More Relaxed/Stress Relief

Feelings of release, that I'm away from people ...

Exercise

... exercise is a decided benefit.

Whether it's climbing or walking, I'm getting whatever exercise that I can.

Social/Family Benefits

... it's a good opportunity to socialize ... with your wife or your son or someone you might encounter while recreating.

... a time to socialize with people of a similar interest whether you go with a group or go with your children or grandchildren or whatever.

When I go with people I enjoy the companionship much more also, more than just meeting and walking down main street towards the mall.

My grandchildren love them ... those trails through time.

(RV) ... one of the benefits I've noticed as a tour guide is to take our little kids out there to Rabbit Valley and take them over the trails and they really enjoy it.

... to have my children and grandchildren to know about our environment ... I think we have to find a way to show them.*

Discover New Things and Places

(RV) The adventure that we used to have and now its gone. We can still have a little of it in Rabbit Valley.

... it's the ability to find something with your own two hands, with your own strength or whatever. Bring it home and admire it. Polish it maybe as a sample, a piece of jewelry ... it's something that leaves a lasting impression.

I don't think there is anything more rewarding than to get a dirty old piece of rock and work on it some, a little, and what you might find inside can blow your mind.

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One thing I enjoy being out there in those areas is discovering new beauty.

(BR) Some of the most rare fossils have been found where none have been found before. A rare fern was just found up there [Black Ridge] ... there are other fossils there that people haven't found yet.

Escape/Seek Solitude

... it's kind of easy to see what kind of benefit that quiet is.

I do a lot of hiking to purposefully try and find pretty remote areas where I'm pretty sure I'm not going to see anybody for a couple of days. Psychologically it's a benefit.

... that I'm away from people.

Access

(RV) One thing I enjoy now is that I can drive through there [RV] now.

I like the ability to go there at various and sundry times. ... you can see it in the morning, you can see it at night.

Creativity

... practice my landscape paintings.

I like places where I can get good photographs. I have a lot of neighbors who like to go out and photograph things commercially. I not only photograph the geology but I have a wife who ... likes to photograph flowers.

Character of the Area/Nature

(BR) You are seeing country you are not going to see any place else. You can't go up there without feeling a special something. ...

(BR) ... the view from Black Ridge is unbeatable, absolutely unbeatable. It's a unique experience, there is nothing like it ...

(RV) ... Rabbit Valley is wonderful. If you go down in the spring of the year, the wildflowers are wonderful, just gorgeous. The rocks are just outstanding. There isn't a place you can go there that doesn't have a special something.

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Community Study

METHODOLOGY

In March, 1993, researchers and BLM managers expanded the goals of the RCBR User Study to determine how nearby communities benefited from recreation taking place in the Ruby Canyon-Black Ridge area. Northern Arizona University, Grand Junction and Colorado State Office BLM recreation staff, and B. Driver designed a questionnaire that would target these community benefits.

Sampling

In May, 1993, the local BLM personnel identified 30 men and women in the Grand Junction area who were considered community leaders. These people were contacted by an NAU representative who explained the project, asked if they would like to participate in the community survey, and inquired about other people who they considered to be community leaders and would like to participate in the survey. This "snow-ball" procedure of name generation resulted in multiple lists of potential survey participants. Community leaders whose names appeared on more than two lists were selected and contacted to see if they would participate in the project. Those people who agreed were subsequently contacted to schedule an interview.

Interviewers took the questionnaire to the participants' home or work where it was completed and returned to the interviewer. Appendix D contains a list of the occupations of community leaders and the number of participants within each occupation group. Appendix E contains a copy of the questionnaire

Interviewing took place from June to July, 1993. A total of 50 community leaders completed the questionnaire. Data were entered into a microcomputer using dBASE III+

software. Percentages and means were calculated using SYSTAT (version 5) statistical analysis software (Wilkinson et al. 1992).

RESULTS

Benefits

The study participants were asked to indicate the extent they felt the Ruby Canyon-Black Ridge area contributes to 19 community benefits. Contribution was measured using a 4-point Likert scale (1 = no contribution to 4 = a major contribution). Mean contribution scores were calculated and are presented in Table 22.

Community leaders' feel that the RCBR area is a major contributor (mean of 3.7) to *a feeling that Grand Junction is a special place to live* and *maintaining an outdoor-oriented lifestyle for local residents*. RCBR is, in fact, viewed by community leaders as providing a number of community benefits. Only one of the benefits listed, a *greater awareness of the ethnic diversity within the community*, had a mean less than 2.0.

Table 22 Perceptions of the contributions of Ruby Canyon-Black Ridge to community benefits

Benefits	Mean[1]	n
A feeling that Grand Junction is a special place to live.	3.7	48
Maintaining an outdoor-oriented lifestyle for local residents	3.7	47
The appeal of the Grand Junction area as a tourism attraction	3.6	47
A greater concern for the natural environment among residents	3.5	49
A greater understanding of the natural environment in which residents live	3.5	49
Opportunities for exercise that can improve the health of local people	3.5	49
The opportunity for residents to live a western lifestyle	3.3	48
Increased knowledge about the cultural resources in the area	3.0	48
A more stable economy within the community	2.9	47
Local economic growth	2.8	50
A more stable economy for the surrounding region	2.8	47
Stronger family bonds within the community	2.7	43
Opportunities for residents to grow spiritually	2.6	42
A stronger sense of community togetherness or cohesion	2.4	50
Preserving the small-town character of our community	2.4	45

Table 22, continued

Benefits	Mean[1]	n
Increased work productivity among community residents	2.2	43
Reduced health costs among community resident	2.2	43
A reduction in juvenile delinquency	2.0	43
Greater awareness of the ethnic diversity within the community	1.6	43

[1] 1=No Contribution, 2=Minor Contribution, 3=Moderate Contribution, 4=Major Contribution.

Contribution of RCBR Zones

To learn how community leaders see the contribution of the five individual Ruby Canyon-Black Ridge zones, survey participants were asked to indicate what they felt was the primary value of each of the five zones. Possible response categories included: a tourism attraction, rangeland for livestock, wildlife habitat, a recreation area, wilderness, an educational resource, a cultural resource, and "other."

As shown in Table 23, the majority of the community members feel Zones 1--Rabbit Valley/Trail Through Time, 2--Mary's and Lion's Loops, 3--Ruby Canyon/Colorado River are most valuable as *recreation areas*. Zone 4--Rattlesnake Arches/Pollock Canyon is also valued as a *recreation area* (28%), but community leaders feel it is most valuable as a *tourism attraction* (36%). The community leaders consider Zone 5--Mee, Knowles, and Jones Canyons, the most primitive of the five zones, most valuable as a *wilderness area.*

Table 23 Value of the five RCBR zones

Primary Value	Percent of Respondents				
	Zone 1 n=50	Zone 2 n=49	Zone 3 n=50	Zone 4 n=50	Zone 5 n=47
A Tourism Attraction	14	14	18	36	2
Rangeland For Livestock	2	0	0	0	8
Wildlife Habitat	8	4	10	12	26
A Recreation Area	36	80	62	26	10
Wilderness	2	0	4	10	42
An Educational Resource	28	0	0	8	0
A Cultural Resource	4	0	2	2	0
Other	6	0	4	6	6

Of the five zones, Zone 1 was the zone most often valued by community leaders as an *educational resource* (28%). This is not surprising since the Trail Through Time, which is located in Zone 1, has interpretive facilities describing the paleontological features of the area.

Contact with BLM

Community leaders were asked how often they were in contact with Grand Junction BLM managers. The majority (78%) said they had had at least some contact with someone from the BLM office during the year. Close to one-third had interacted with people from the Grand Junction office one to five times during the past year (Figure 20). While only 4 percent of community leaders said they were in contact with BLM personnel 11 to 20 times,

22 percent interacted a great deal with the BLM, contacting someone in the Grand Junction office more than 20 times over the past year.

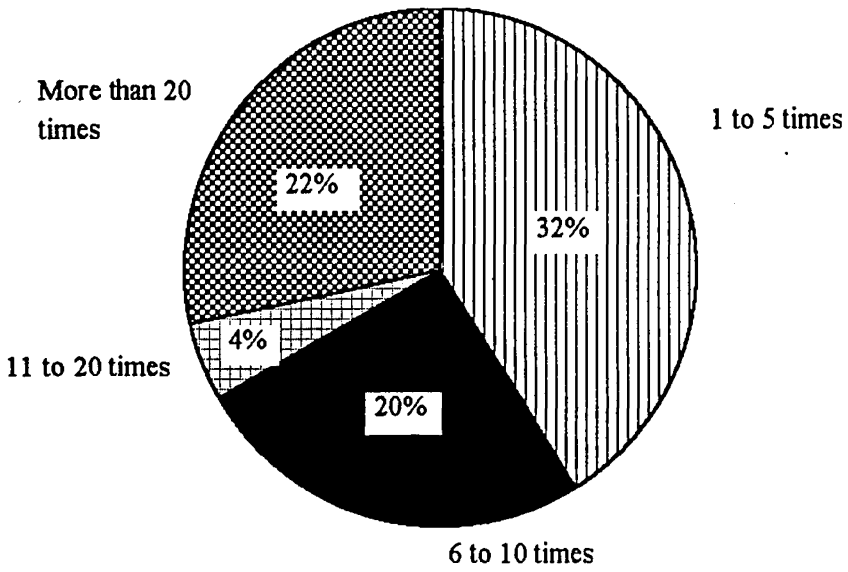

Figure 20 Community Leader Contact with BLM Managers
n=39

Perception of Management

Community leaders were asked to describe their perceptions of how the BLM manages the Ruby Canyon-Black Ridge area using seven pairs of descriptors of various management styles. Each type of management style was represented by a pair of dichotomous items (e.g., many uses management vs. single use management). Community leaders were asked to place a checkmark at the location along the continuum between the two opposing items that best reflected their perception of BLM's management style. Table 24 displays community leaders' responses for each location along a continuum for each of the seven management descriptors..

Table 24 Community leaders' perceptions of BLM management style

Hands-On n=47	12.8%	38.3%	29.8%	7.0%	2.1%	Hands-Off
Many Uses n=47	38.3%	48.9%	6.4%	4.3%	2.1%	Single Use
Protection n=46	15.2%	37.0%	39.1%	4.3%	4.3%	Development
Conservation n=47	12.8%	57.4%	21.3%	4.3%	4.3%	Exploitation
Preservation n=47	8.5%	29.8%	36.2%	21.3%	4.3%	Utilization
Responds to local needs n=47	17.0%	27.7%	40.4%	8.5%	6.4%	Responds to national needs
Anticipate problems n=47	14.9%	23.4%	42.6	12.8%	6.4%	React to problems

Satisfaction With BLM Management

Results presented in Table 25 suggest that community leaders are generally satisfied with Grand Junction BLM personnel and their management of the land. Community leaders responded to a series of questions about their satisfaction with BLM management using a 7-point Likert scale (1 = totally dissatisfied to 7 = totally satisfied). Mean satisfaction scores were calculated for each of 4 issues. Community leaders were especially satisfied with their association with Grand Juncation BLM personnel and office staff (a mean of 5.9).

Community leaders are generally satisfied with how visitors and the land are being cared for and BLM's management of permits, facilities, etc.

Table 25 Community leader satisfaction with BLM management

Satisfaction With:	Mean[1]	n
Your association with Grand Junction BLM personnel or office staff	5.9	49
How the land is being cared for	5.0	47
How the visitors are cared for	4.9	46
BLM's management of the area (permits, rules, facilities, etc.)	5.1	47

[1] 1=Totally Dissatisfied and 7=Totally Satisfied

Promotion of the Grand Junction Area

Community leaders were asked to indicate how active they believed the BLM to be in promoting recreation opportunities in the Grand Junction. They were also asked to indicate how active they believe the BLM should be in those efforts. Results presented in Table 26 suggest community leaders feel the local BLM office is slightly more active in promoting recreation opportunities in the Grand Junction area than they should be. Community leaders feel the BLM is slightly more than moderately active (mean of 2.3) in promoting recreation activities. However, they believe the Grand Junction office should be a little less than moderately active in promoting tourism (mean of 1.8).

Table 26 Community leaders' perceptions of BLM's promotion of recreation opportunities in the Grand Junction area

Promotion of the Area	Mean[1]	n
How active is the BLM?	2.3	48
How active should the BLM be?	1.8	50

[1] 1=Very Active, 2=Moderately Active, 3=Somewhat Active, 4=Not Active, 5=Don't Know

Manager-Defined Benefit Opportunities

METHODOLOGY

While the majority of the data collection for the Ruby Canyon-Black Ridge pilot study involved those individuals who receive the benefits (i.e., community members and visitors), it was thought that information could also be gained from the managers who help to provide those benefits. In the Spring of 1992, B. Driver of the Rocky Mountain Forest and Range Experiment Station and Marty Lee of Northern Arizona University met with Bureau of Land Management personnel and asked them to list the benefits they felt visitors could realize in each of the five RCBR study area management zones.

Over the following year, Don Bruns of the Colorado State BLM office and Brian Hopkins, Wade Johnson, and Catherine Robertson of the Grand Junction BLM office held several brainstorming sessions regarding potential benefit opportunities being provided in RCBR. A list of manager-perceived benefit opportunities that combines the results of both efforts is presented below.

MANAGER-DEFINED BENEFIT OPPORTUNITIES IN RCBR

Rabbit Valley/Trail Though Time
- Nature and Cultural Learning
- Physical Fitness
- Social Bonding and Cohesion
- Improve Relations with Family/Friends
- Reduce Delinquency
- Community/Political Involvement
- Sense of Freedom
- Local Economic Growth
- Enhance Environmental Ethic

Lion's and Mary's Loops
- Physical Fitness
- Meet Desire for Challenge
- Reduce Tension and Stress
- Local Economic Growth

Ruby Canyon/Colorado River
- Social Bonding and Cohesion
- Improve Relations with Family/Friends
- Develop Skills and Abilities
- Aquire Feeling of Freedom
- Aesthetics Appreciation
- Sense of Adventure
- Local Economic Growth
- Enhance Environmental Ethic

Rattlesnake Arches/Pollock Canyon
- Physical Fitness
- Aesthetic Appreciation
- Social Bonding and Cohesion
- Sense of Adventure
- Escape Crowds
- Community Satisfaction
- Local Economic Growth
- Enhance Environmental Ethic

Mee, Knowles, and Jones Canyons
- Develop Skills and Abilities
- Aesthetic Appreciation
- Sense of Adventure
- Nurture Spiritual Growth
- Experience Solitude
- Escape Crowds of People
- Environmental Protection (ecosystem)

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Appendix A

Visitor Survey Sampling Plan

Northern Arizona University
Ruby Canyon-Black Ridge Study

SAMPLING SCHEDULE

			AM (7:30a.m.-12:30)	PM (1 - 6 p.m.)
Summer 1992				
July	12	(Sun)	Loma Launch	Trail Thru Time
	13	(Mon)	Black Ridge E.	
	15	(Wed)	Loma Launch	Lion & Mary Loops
	17	(Fri)	Trail Thru Time	Black Ridge E.
	18	(Sat)	Loma Launch	Black Ridge W.
	19	(Sun)	Trail Thru Time	Rabbit Valley
August	6	(Thur)	(make up day if needed)	
	7	(Fri)	Loma Launch	
	8	(Sat)	Loma Launch	Black Ridge E.
	9	(Sun)	Lion & Mary Loops	Black Ridge E.
	10	(Mon)	Rabbit Valley	Trail Thru Time
Fall 1992				
mid-Sept.		(Tues)	Loma Launch	Black Ridge E.
		(Wed)	Trail Thru Time	Lion & Mary Loops
		(Thur)	Loma Launch	Black Ridge E.
		(Fri)	Lion & Mary Loops	Black Ridge W.
		(Sat)	Rabbit Valley	Trail Thru Time
		(Sun)	Loma Launch	Rabbit Valley
mid-October		(Sat)	Black Ridge E.	Black Ridge W.
		(Sun)	Trail Thru Time	Rabbit Valley
		(Mon)	Black Ridge W.	Black Ridge E.
		(Tues)	Black Ridge E.	
Spring 1993				
late April/ early May		(Mon)	Lion & Mary Loops	
		(Tues)	Rabbit Valley	Trail Thru Time
		(Wed)	Black Ridge E.	
		(Thur)	Lion & Mary Loops	Rabbit Valley
		(Fri)	Trail Thru Time	Black Ridge E.
		(Sat)	Loma Launch	
		(Sun)	Loma Launch	

early June	(Mon)	Loma Launch	Black Ridge E.
	(Tues)		Trail Thru Time
	(Wed)	Rabbit Valley	Lion & Mary Loops
	(Thur)	Trail Thru Time	
	(Fri)	Black Ridge E.	Rabbit Valley
	(Sat)	Loma Launch	Lion & Mary Loops

Sampling Locations:

Loma Launch:	Boat launch area, Loma parking lot
Lion & Mary Loops:	Loma parking lot, pulloffs along frontage road off I-70, trail registration box registration area, along trail itself
Rabbit Valley:	Off the I-70 interchange at Rabbit Valley exit, in parking lot
Trail Thru Time:	Parking lot, at the interpretive trail
Black Ridge East:	Black Ridge/Rattlesnake access road, Pollock Bench parking area
Black Ridge West:	wherever you can find people out there along the road

Sampling Plan:

Collect 20 names and addresses per time block in all areas except:
- Black Ridge East - collect 15-20 names and addresses per time block
- Black Ridge West - collect 12 names and addresses per time block

Total Number of Names and Addresses to Collect: 1,000

Ruby Canyon	168
Rabbit Valley	146
Trail Thru Time	194
Lion's and Mary's Loops	160
Black Ridge East	240
Black Ridge West	50
	1,000*

*Distribution is based on BLM-supplied estimates of use in each of the designated use zones

Appendix B

Visitor Survey On-Site Interview

Ruby Canyon-Black Ridge Recreation Study

ON-SITE INTERVIEW

ID No._____ Date:_____ Location _____

1. Entry Point_____

2. Is this you first visit to the Ruby Canyon-Black Ridge area?

   1 YES
   2 NO

   (If no) How many times have you visited this area in the past, excluding this visit?

   1 1-3 TIMES
   2 4-8 TIMES
   3 9 OR MORE TIMES

3. How many people are you travelling with on this trip (including yourself)?

   _____ PEOPLE

4. How many people are travelling in your vehicle (including yourself)?

   _____ PEOPLE

5. What type of group are you travelling with (e.g., family friends, etc.)?

   1 ALONE
   2 A COUPLE
   3 FAMILY WITH CHILDREN
   4 TWO OR MORE FAMILIES OR RELATIVES TOGETHER
   5 FAMILY AND FRIENDS
   6 TWO OR MORE FRIENDS TOGETHER
   7 ORGANIZED GROUP (tour group, Boy Scouts, etc.)

6. What is your age? _____ 7. Gender: M F (circle)

7. Planned Exit Point: _____

8. (Boaters only) Type of watercraft: _____

9. We'd like to know more about your visit to the area and would like to send you a questionnaire in the mail to fill out and send back to us. Can we do that? YES NO (If YES) Get name and address below:

NAME (PLEASE PRINT):_____

CURRENT MAILING ADDRESS:_____

CITY:_____ STATE:_____ ZIP:_____

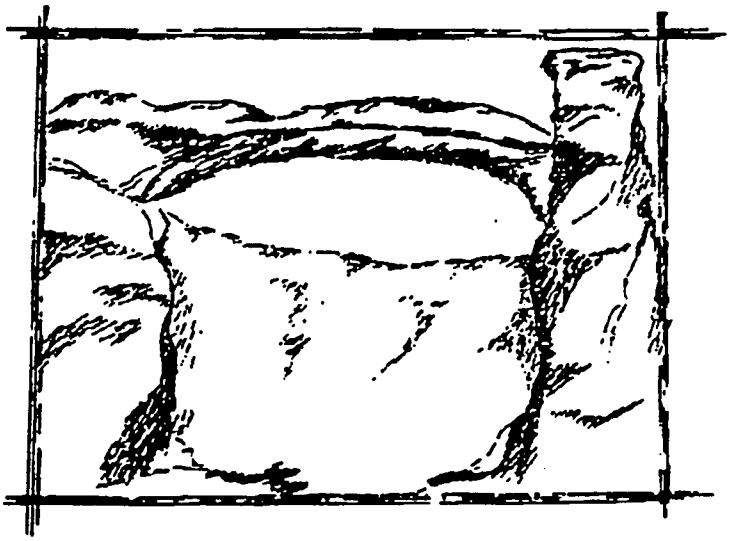
COUNTRY: _____

Appendix C

Visitor Survey Mail-back Questionnaire

Ruby Canyon-Black Ridge

Visitor Study



NORTHERN ARIZONA UNIVERSITY

School of Forestry
Northern Arizona University
Flagstaff, AZ 86011

1992-1993 RUBY CANYON-BLACK RIDGE VISITOR STUDY

We are interested in learning about your visit to the Ruby Canyon-Black Ridge area during which our interviewer asked if you would help us by completing this questionnaire. The area we are interested in is shown on the enclosed map and is called the Ruby Canyon-Black Ridge Study Area.

First we would like to ask you a few questions about the activities you engaged in during your visit to that area when you were interviewed.

Q1. We have listed a number of outdoor recreation activities that could be enjoyed within the study area. Please circle the number that indicates how much time, if any, you spent doing each activity during the visit to the study area when you were interviewed

	TIME SPENT				
ACTIVITIES	NONE	1 HOUR OR LESS	SEVERAL HOURS	ALL DAY	MORE THAN 1 DAY
Camping near vehicle	0	1	2	3	4
Sightseeing/driving for pleasure	0	1	2	3	4
Camping away from vehicle	0	1	2	3	4
Four wheel drive/All-terrain vehicle (ATV) driving	0	1	2	3	4
Hiking/walking	0	1	2	3	4
Motorcycling	0	1	2	3	4
Mountain biking	0	1	2	3	4
Road biking	0	1	2	3	4
Motor boating	0	1	2	3	4
Photography	0	1	2	3	4
Jet skiing	0	1	2	3	4
Partying	0	1	2	3	4
Rafting	0	1	2	3	4
Rock collecting/prospecting	0	1	2	3	4
Canoeing/kayaking	0	1	2	3	4
Hunting	0	1	2	3	4
Fishing	0	1	2	3	4
Nature study	0	1	2	3	4
Swimming	0	1	2	3	4
Cross country skiing	0	1	2	3	4
Sunbathing/beach activities	0	1	2	3	4
Rock climbing/bouldering	0	1	2	3	4
Picnicking	0	1	2	3	4
Watching wildlife	0	1	2	3	4
Horseback riding	0	1	2	3	4
Target shooting	0	1	2	3	4
Viewing dinosaur fossils	0	1	2	3	4
Viewing Indian rock art	0	1	2	3	4
Others:_____	0	1	2	3	4

To answer this next set of questions, you will need to use the map stapled to the back of this questionnaire. Please tear that map off and look at it now. You may keep the map if you wish.

Q2a. On the map the study area is divided into five (5) zones. Please estimate how much time (in hours) you spent in each zone during the visit when you were contacted by our interviewer. Show total hours, including both day and night.

ZONE	AMOUNT OF TIME SPENT IN HOURS
1. Rabbit Valley/Trail Through Time	_____
2. Mary's and Lion's Loops	_____
3. Ruby Canyon/Colorado River	_____
4. Rattlesnake Arches/Pollock Canyon	_____
5. Mee, Knowles or Jones Canyon	_____

b. PLEASE CIRCLE the number of the zone you indicated as where you spent the most time during that visit to the study area.

Q3. Within the zone where you spent the most time, which of the activities listed in Q1. contributed most to the total satisfaction you received from the trip when you were contacted by our interviewer?

List three in order of satisfaction.

Most satisfying: _____

2nd most satisfying: _____

3rd most satisfying: _____

NOTE: WE WOULD LIKE YOU TO THINK ABOUT YOUR MOST ENJOYABLE ACTIVITY AND THE ZONE WHERE YOU SPENT THE MOST TIME AS YOU CONTINUE ON THROUGH THIS QUESTIONNAIRE.

Q4a. People achieve many benefits from their recreation outings. While engaged in your most satisfying activity in the zone where you spent the most time, please indicate:

1. How desirable each of the following benefits were as reasons for your visit to the Ruby Canyon-Black Ridge area during the trip when you were contacted by our interviewer, and

2. The extent to which you feel you were able to obtain or realize each of the following benefits.

		1. DESIRABILITY					2. ABLE TO OBTAIN			
	BENEFITS	VERY UNDESIRABLE	SOMEWHAT UNDESIRABLE	NEITHER OR NOT APPLICABLE	SOMEWHAT DESIRABLE	VERY DESIRABLE	NOT AT ALL ABLE	SOMEWHAT ABLE	MODERATELY ABLE	TOTALLY ABLE
1.	Develop your skills and abilities	-2	-1	0	+1	+2	1	2	3	4
2.	Do things your own way	-2	-1	0	+1	+2	1	2	3	4
3.	Be in control of things that happen	-2	-1	0	+1	+2	1	2	3	4
4	Chance dangerous situations	-2	-1	0	+1	+2	1	2	3	4
5.	Bring your family closer together	-2	-1	0	+1	+2	1	2	3	4
6.	Enjoy the natural scenery	-2	-1	0	+1	+2	1	2	3	4
7.	Be with members of your own group	-2	-1	0	+1	+2	1	2	3	4
8.	Be with other people who enjoy the same things you do	-2	-1	0	+1	+2	1	2	3	4
9.	Learn more about the natural history of the area	-2	-1	0	+1	+2	1	2	3	4
10.	Keep physically fit	-2	-1	0	+1	+2	1	2	3	4
11.	Do something creative such as sketch, paint, or take photographs	-2	-1	0	+1	+2	1	2	3	4
12.	Talk to new and varied people	-2	-1	0	+1	+2	1	2	3	4
13.	Observe other people in the area	-2	-1	0	+1	+2	1	2	3	4
14.	Experience new and different things	-2	-1	0	+1	+2	1	2	3	4
15.	Learn more about nature	-2	-1	0	+1	+2	1	2	3	4
16.	Rest physically	-2	-1	0	+1	+2	1	2	3	4
17.	Enjoy the smells and sounds of nature	-2	-1	0	+1	+2	1	2	3	4
18.	Experience excitement	-2	-1	0	+1	+2	1	2	3	4
19.	Learn more about the cultural history of the area	-2	-1	0	+1	+2	1	2	3	4
20.	Have others know that you have been there	-2	-1	0	+1	+2	1	2	3	4
21.	Maintain a sense of self-pride	-2	-1	0	+1	+2	1	2	3	4
22.	Express and nurture personal spiritual values and orientations	-2	-1	0	+1	+2	1	2	3	4
23.	Reflect on and clarify personal values	-2	-1	0	+1	+2	1	2	3	4
24.	Help release or reduce built-up tension	-2	-1	0	+1	+2	1	2	3	4

Q4a. Continued

BENEFITS	1. DESIRABILITY: VERY UNDESIRABLE	SOMEWHAT UNDESIRABLE	NEITHER OR NOT APPLICABLE	SOMEWHAT DESIRABLE	VERY DESIRABLE	2. ABLE TO OBTAIN: NOT AT ALL ABLE	SOMEWHAT ABLE	MODERABELY ABLE	TOTALLY ABLE
25. Enjoy a different temperature than what I experience back home	-2	-1	0	+1	+2	1	2	3	4
26. Rest mentally	-2	-1	0	+1	+2	1	2	3	4
27. Get away from the usual demands of life	-2	-1	0	+1	+2	1	2	3	4
28. Experience solitude	-2	-1	0	+1	+2	1	2	3	4
29. Get away from crowds of people	-2	-1	0	+1	+2	1	2	3	4
30. Escape the family temporarily	-2	-1	0	+1	+2	1	2	3	4
31 Share what you have learned with others	-2	-1	0	+1	+2	1	2	3	4
32. Lead other people	-2	-1	0	+1	+2	1	2	3	4
33. Be with caring and sensitive people	-2	-1	0	+1	+2	1	2	3	4
34. Avoid the unexpected	-2	-1	0	+1	+2	1	2	3	4
35. Do something challenging	-2	-1	0	+1	+2	1	2	3	4
36. Feel more self-confident	-2	-1	0	+1	+2	1	2	3	4
37. Experience a sense of personal freedom	-2	-1	0	+1	+2	1	2	3	4
38. Help you recover from everyday stresses	-2	-1	0	+1	+2	1	2	3	4
39. Reduce depression or anxiety	-2	-1	0	+1	+2	1	2	3	4
40. Gain a greater sense of independence or autonomy	-2	-1	0	+1	+2	1	2	3	4
41. Feel more self-reliant	-2	-1	0	+1	+2	1	2	3	4
42. Gain a more holistic sense of well-being	-2	-1	0	+1	+2	1	2	3	4
43. Help clarify my thinking	-2	-1	0	+1	+2	1	2	3	4
44. Feel at one with other living things	-2	-1	0	+1	+2	1	2	3	4
45. Enjoy a place that is special to me	-2	-1	0	+1	+2	1	2	3	4
46. Experience adventure	-2	-1	0	+1	+2	1	2	3	4
47. Put me in a happier frame of mind	-2	-1	0	+1	+2	1	2	3	4
48. Feel exhilarated	-2	-1	0	+1	+2	1	2	3	4
49. Help maintain pride in my race or cultural subgroup	-2	-1	0	+1	+2	1	2	3	4
50. Develop or enhance your own environmental ethic	-2	-1	0	+1	+2	1	2	3	4
51. Help others develop their skills	-2	-1	0	+1	+2	1	2	3	4
52. Maintain a desired image of myself	-2	-1	0	+1	+2	1	2	3	4
53. Improve my outlook on life	-2	-1	0	+1	+2	1	2	3	4
54. Enjoy a sense of timelessness	-2	-1	0	+1	+2	1	2	3	4
55. Others: (please list)									
_____	-2	-1	0	+1	+2	1	2	3	4
_____	-2	-1	0	+1	+2	1	2	3	4

Q4b. For those benefits that were most desirable but you felt you were not able to obtain them, please briefly tell us why:

BENEFIT	WHY IT WAS NOT OBTAINED
_____	_____
_____	_____
_____	_____

Q5. The kinds of benefits one can obtain are generally dependent upon the SETTINGS within which they occur. Please assume you could engage in your MOST SATISFYING ACTIVITY in any type of setting you desire during a future visit to the study area.

Please rate each of the following setting characteristics as to how desirable or undesirable they would be to you to REALIZE THOSE BENEFITS MOST IMPORTANT TO YOU.

(Circle the number that best describes how you feel about EACH setting characteristic).

SETTING CHARACTERISTICS	UNDESIRABLE				DESIRABLE		
	VERY	MODERATELY	SOMEWHAT	NEITHER	SOMEWHAT	MODERATELY	VERY
Access to the Area							
a. No motorized use is allowed , so area is accessible only by hiking cross-country	-3	-2	-1	0	+1	+2	+3
b. Accessible only by non-motorized trails, mountain bikes, on foot	-3	-2	-1	0	+1	+2	+3
c. Accessible on motorized trails and primitive roads (off-highway vehicles such as trail bikes, 4-wheel drives)	-3	-2	-1	0	+1	+2	+3
d. Accessible by all vehicles	-3	-2	-1	0	+1	+2	+3
Size and Naturalness of the Area							
a. An undisturbed natural area about 5,000 acres or larger in size	-3	-2	-1	0	+1	+2	+3
b. A largely undisturbed natural area between 2,500 and 5,000 acres in size	-3	-2	-1	0	+1	+2	+3
c. An area that is somewhat modified but appears natural. Land use activities such as livestock grazing may be evident. No particular size of area is needed	-3	-2	-1	0	+1	+2	+3
d. A substantially modified area with both man-made and natural features such as rural or agricultural landscapes. Land uses such as mining and water developments may be present.	-3	-2	-1	0	+1	+2	+3
e. An area where roads, buildings, and powerlines clearly dominate the landscape	-3	-2	-1	0	+1	+2	+3
Distance from Roads							
a. Further than 3 miles from any road with motorized vehicles including motorcycles	-3	-2	-1	0	+1	+2	+3
b. At least 1/2 mile away from any road with motorized vehicles	-3	-2	-1	0	+1	+2	+3
c. Near or on 4-wheel drive roads but at least 1/2 mile from roads drivable by cars	-3	-2	-1	0	+1	+2	+3
d. Near or on roads drivable by cars but at least 1/4 mile from highways.	-3	-2	-1	0	+1	+2	+3
e. On or near primary highways	-3	-2	-1	0	+1	+2	+3

Q5. Continued

SETTING CHARACTERISTICS	UNDESIRABLE VERY	MODERATELY	SOMEWHAT	NEITHER	DESIRABLE SOMEWHAT	MODERATELY	VERY
Contacts with Other People							
a. Very little contact with other people (see 6 or fewer groups per day, see less than 3 groups at your campsite).	-3	-2	-1	0	+1	+2	+3
b. Little contact with other people (see 6-15 groups per day, see 6 or fewer groups at your campsite).	-3	-2	-1	0	+1	+2	+3
c. Moderate contact with other people (see 15+ groups per day, fewer away from roads and developed sites).	-3	-2	-1	0	+1	+2	+3
d. High degree of contact with other people (30+ groups per day, fewer away from roads and developed areas).	-3	-2	-1	0	+1	+2	+3
e. In constant contact with other people (large numbers of users on site and in nearby areas)	-3	-2	-1	0	+1	+2	+3
Amount and Type of Facilities							
a. No facilities	-3	-2	-1	0	+1	+2	+3
b. A few primitive facilities such as trails and signs	-3	-2	-1	0	+1	+2	+3
c. A few rustic facilities are provided to protect the environment and for visitor safety (e.g., tables and pit toilets)	-3	-2	-1	0	+1	+2	+3
d. Moderate number of facilities such as picnic tables, fire grates, parking areas	-3	-2	-1	0	+1	+2	+3
e. Numerous facilities provided to accommodate many users (e.g., surfaced trails, developed campgrounds, stores)	-3	-2	-1	0	+1	+2	+3
Amount of Management or Regulation							
a. No visitor management controls, regulations, or information facilities	-3	-2	-1	0	+1	+2	+3
b. A few visitor management controls or regulations, are noticeable, limited information facilities are present.	-3	-2	-1	0	+1	+2	+3
c. On-site regulations and controls are noticeable, simple information facilities are present.	-3	-2	-1	0	+1	+2	+3
d. On-site regulations and controls are numerous, more complex information facilities are present.	-3	-2	-1	0	+1	+2	+3
e. On-site regulations and controls are obvious and numerous with sophisticated information exhibits present.	-3	-2	-1	0	+1	+2	+3

The Grand Junction office of the U.S. Bureau of Land Management, the agency that manages the study area, is writing a new management plan for the area. Your perceptions of problems in the study area and possible management actions to solve them will be helpful to managers.

Q6. To what extent did you find each of the following to be a problem **IN THE ZONE WHERE YOU SPENT THE MOST TIME** during the visit when contacted by our interviewer.

Circle the number that best describes how serious you found EACH to be.

		NOT A PROBLEM	MINOR PROBLEM	MODERATE PROBLEM	SERIOUS PROBLEM	VERY SERIOUS PROBLEM
a.	Too few restroom facilities where you first entered the zone	1	2	3	4	5
b.	Too few restroom facilities within the zone	1	2	3	4	5
c.	Too few information signs where you entered the zone	1	2	3	4	5
d.	Too few information signs within the zone	1	2	3	4	5
e.	Too few visitor information brochures available about recreation in the zone	1	2	3	4	5
f.	Bad road conditions within the zone	1	2	3	4	5
g.	Scenic vistas impaired by air pollution	1	2	3	4	5
h.	Presence of human waste	1	2	3	4	5
i.	Litter	1	2	3	4	5
j.	Too few campsites	1	2	3	4	5
k.	Deteriorated campsites	1	2	3	4	5
l.	Your preferred campsite was occupied	1	2	3	4	5
m.	Evidence of past campfires	1	2	3	4	5
n.	People having parties and being noisy	1	2	3	4	5
o.	People riding mountain bikes	1	2	3	4	5
p.	People riding 4-wheel drive/ATV vehicles	1	2	3	4	5
q.	People riding motorcycles	1	2	3	4	5
r.	Vandalized or shot-up signs	1	2	3	4	5
s.	Seeing evidence of livestock grazing	1	2	3	4	5

If you spent the most time in Zone 3 (Ruby Canyon), please respond to the following items. If you did not spend the most time in Zone 3, please skip to Q7.

t.	People fishing at the Loma Launch site	1	2	3	4	5
u.	Too many people on the river	1	2	3	4	5
v.	Crowding at Westwater Ranger Station	1	2	3	4	5
w.	Jet skis on the river	1	2	3	4	5
x.	Campsite locations not identified along the river	1	2	3	4	5
y.	Not enough campsites along the river	1	2	3	4	5
z.	River campsites too close together	1	2	3	4	5
aa.	Motorized watercraft on the river	1	2	3	4	5
bb.	Nonmotorized watercraft on the river	1	2	3	4	5
cc.	Off-highway vehicles visible from the river	1	2	3	4	5
dd.	Crowding at Loma Launch site	1	2	3	4	5

Q7. How would you feel about each of the following possible management actions taking place in the ZONE WHERE YOU SPENT THE MOST TIME? Answer ONLY the questions that relate to that zone. Circle the numbers that indicate how much you would oppose or favor each action.

POSSIBLE MANAGEMENT ACTIONS	VERY STRONGLY OPPOSE	STRONGLY OPPOSE	SOMEWHAT OPPOSE	NEUTRAL	SOMEWHAT FAVOR	STRONGLY FAVOR	VERY STRONGLY FAVOR
<u>Zone 1 - Rabbit Valley</u>							
a. Provide more motorcycle/ATV riding opportunities in the Rabbit Valley area	-3	-2	-1	0	+1	+2	+3
b. Improve the main north-south Rabbit Valley road to 2-wheel-drive standards	-3	-2	-1	0	+1	+2	+3
c. Limit camping to designated areas in Rabbit Valley	-3	-2	-1	0	+1	+2	+3
d. BLM should conduct more patrols to assist visitors and enforce regulations	-3	-2	-1	0	+1	+2	+3
<u>Zone 3 - Ruby Canyon</u>							
a. Provide toilets along the river	-3	-2	-1	0	+1	+2	+3
b. Restrict numbers of people using the river at any one time	-3	-2	-1	0	+1	+2	+3
c. Limit the size of each group on the river	-3	-2	-1	0	+1	+2	+3
d. Limit the horsepower of motorized watercraft	-3	-2	-1	0	+1	+2	+3
e. Restrict use of motorized watercraft on the river during the busy summer season	-3	-2	-1	0	+1	+2	+3
f. Prohibit motorized watercraft on the river	-3	-2	-1	0	+1	+2	+3
g. Prohibit upstream river travel (allow only downstream river travel)	-3	-2	-1	0	+1	+2	+3
h. Prohibit upstream river travel during the busy summer season	-3	-2	-1	0	+1	+2	+3
i. Limit camping to designated areas along the river	-3	-2	-1	0	+1	+2	+3
j. Use only campsites assigned in advance	-3	-2	-1	0	+1	+2	+3
k. Prohibit wood fires altogether	-3	-2	-1	0	+1	+2	+3
l. Allow wood fires only in designated areas	-3	-2	-1	0	+1	+2	+3
m. Prohibit off-highway vehicle use within the river corridor except on designated routes	-3	-2	-1	0	+1	+2	+3
n. Provide more parking near the boat launch	-3	-2	-1	0	+1	+2	+3
o. BLM should conduct more patrols to assist visitors and enforce regulations	-3	-2	-1	0	+1	+2	+3
<u>Zone 4 or Zone 5 - Black Ridge Area</u>							
a. Build more hiking trails in the Black Ridge area	-3	-2	-1	0	+1	+2	+3
b. Maintain the Black Ridge access road (on the south side of Zone 4) to be accessible by car and/or 2-wheel drive truck	-3	-2	-1	0	+1	+2	+3
c. Pave the Black Ridge access road (on the south side of Zone 4)	-3	-2	-1	0	+1	+2	+3
d. Limit camping in the Black Ridge Canyons Wilderness Study Area to designated areas	-3	-2	-1	0	+1	+2	+3
e. BLM should conduct more patrols to assist visitors and enforce regulations	-3	-2	-1	0	+1	+2	+3

Q8. As part of developing a new management plan, BLM managers need to know which services you desire when visiting the study area as well as your perceptions of how well the Bureau of Land Management is providing those services.

1) Please indicate how desirable each of the following services were to you when you visited the study area; and

2) Remembering your grade school report card, please write in A, B, C, D, F or DK (Don't Know) in the blank provided to reflect how well you feel the BLM is managing the area with regard to each of these services.

		UNDESIRABLE				DESIRABLE			
	SERVICES OR FACILITIES	VERY	MODERATELY	SOMEWHAT	NEITHER	SOMEWHAT	MODERATELY	VERY	GRADE FOR BLM
a.	Helpful and attractive information signs	-3	-2	-1	0	+1	+2	+3	_____
b.	Clean and attractive restrooms	-3	-2	-1	0	+1	+2	+3	_____
c.	Access roads in good condition	-3	-2	-1	0	+1	+2	+3	_____
d.	Telephone requests handled without delay	-3	-2	-1	0	+1	+2	+3	_____
e.	Managers are protecting cultural resources	-3	-2	-1	0	+1	+2	+3	_____
f.	A prompt response to your written request(s)	-3	-2	-1	0	+1	+2	+3	_____
g.	BLM people in the area appear professional and competent	-3	-2	-1	0	+1	+2	+3	_____
h.	BLM people in the area are friendly and hospitable	-3	-2	-1	0	+1	+2	+3	_____
i.	Your vehicle and other personal belongings are safe from threat of vandalism	-3	-2	-1	0	+1	+2	+3	_____
j.	Managers provide for your security by notifying you of natural hazards	-3	-2	-1	0	+1	+2	+3	_____
k.	BLM offices open during convenient times during the week	-3	-2	-1	0	+1	+2	+3	_____
l.	BLM offices open during the right hours each day	-3	-2	-1	0	+1	+2	+3	_____
m.	The opportunity to leave a message for managers after working hours on an answering machine	-3	-2	-1	0	+1	+2	+3	_____
n.	BLM managers who are sensitive to your wants and needs	-3	-2	-1	0	+1	+2	+3	_____
o.	Too many rules and regulations	-3	-2	-1	0	+1	+2	+3	_____
p.	Able to find BLM personnel when you need to	-3	-2	-1	0	+1	+2	+3	_____
q.	Brochures and maps that clearly communicate information about available recreation and tourism opportunities	-3	-2	-1	0	+1	+2	+3	_____

Q8. Continued

	SERVICES OR FACILITIES	UNDESIRABLE VERY	MODERATELY	SOMEWHAT	NEITHER	DESIRABLE SOMEWHAT	MODERATELY	VERY	GRADE FOR BLM
r.	Opportunities for personal freedom without too much restriction by managers	-3	-2	-1	0	+1	+2	+3	_____
s.	The physical quality of the river environment is maintained	-3	-2	-1	0	+1	+2	+3	_____
t.	The arches and surrounding canyons are managed appropriately	-3	-2	-1	0	+1	+2	+3	_____

Q9. Were you travelling with a commercial outfitter? (circle one)

1 NO → (Skip to Q. 10)

2 YES Name of outfitter_____

Were you satisfied with the services your outfitter provided?

1 YES 2 NO

The local area managers need some additional information about your visit, including information about your travel to and from the study area.

Q10. On the visit when you were interviewed, what was your primary mode of transportation to travel from your home to the study area? (circle number)

1 PRIVATE CAR OR TRUCK
2 RENTAL CAR OR TRUCK
3 AIRPLANE
4 TRAIN
5 BUS
6 OTHER (Please specify)
_____

Q11. Was your visit to the Ruby Canyon-Black Ridge area your primary reason for taking the trip away from home? (circle one)

1 YES
2 NO

Q12. Study area managers would like to know how people learn about the Ruby Canyon-Black Ridge area. Please indicate the source(s) of information you used to plan your visit to that area. Please indicate all sources of information. (circle the number or numbers).

1	PERSONAL EXPERIENCE	9	HOTEL OR RESORT
2	FRIENDS, RELATIVES OR OTHERS	10	BLM BROCHURES
3	AUTO CLUB	11	AIRLINE/COMMERCIAL CARRIER
4	CHAMBER OF COMMERCE	12	TELEVISION OR RADIO
5	COLORADO WELCOME CENTER	13	MESA COUNTY/GRAND JUNCTION TOURISM BROCHURES
6	COLORADO TOURISM BOARD		
7	TRAVEL AGENT OR TOUR COMPANY	14	OTHER (Please write in):
8	BOOKS, MAGAZINES OR NEWSPAPERS		_____
			_____

Q13. As part of your visit to the study area, did you stop in the Grand Junction area? (circle one)

1 NO → (Skip to Q. 14)
2 YES Please provide an estimate of the total amount of money you spent in each of the following types of businesses (Put 0 if you didn't spend any money):

a. Restaurants/bars $_____
b. Retail stores/gift shops $_____
c. Gas stations $_____
d. Outfitters and guides $_____

Q14. As part of your visit to the study area, did you stay overnight at any locations outside the study area? (circle one)

1 NO → (Skip to Q. 15)
2 YES

(If yes) Please indicate the number of nights you stayed in each of the following locations and an estimate of the amount of money, if any, you paid to stay overnight:

		Number of nights	Dollars Spent
a.	Camped on other public lands (Forest Service, National Parks, State Parks, etc.)	_____	$_____
b.	Camped in private campgrounds	_____	$_____
c.	Stayed in a nearby motel, hotel, resort, or lodge	_____	$_____
e.	Stayed with friends or family	_____	$_____

This final set of questions will help land managers learn about the people who participated in the survey.

Q15. Which of the following describes your present situation? (circle one number)

1 SINGLE, NO CHILDREN
2 MARRIED, NO CHILDREN
3 MARRIED WITH CHILDREN
4 SINGLE PARENT WITH CHILDREN

Q16. (Optional) Which of these best describes your race or ethnic group? (circle number)

1 AMERICAN INDIAN OR ALASKAN NATIVE
2 ASIAN OR PACIFIC ISLANDER
3 BLACK, NOT OF HISPANIC ORIGIN
4 HISPANIC
5 WHITE, NOT OF HISPANIC ORIGIN

Q17. What is the highest level of education you have completed? (circle number)

1 EIGHTH GRADE OR LESS
2 SOME HIGH SCHOOL
3 HIGH SCHOOL GRADUATE OR GED
4 SOME COLLEGE
5 COLLEGE GRADUATE
6 SOME GRADUATE SCHOOL
7 GRADUATE DEGREE

Q18. What was your approximate total household income, before taxes, in 1991? (circle number)

1 LESS THAN $10,000
2 $10,000 TO $19,999
3 $20,000 TO $29,999
4 $30,000 TO $39,999
5 $40,000 TO $49,999
6 $50,000 TO $59,999
7 $60,000 TO $69,999
8 $70,000 TO $79,999
9 $80,000 TO $89,999
10 $90,000 TO $99,999
11 $100,000 OR MORE

Q19. At the time you took your trip to the Ruby Canyon-Black Ridge study area, did anyone in your group have any disabilities that interfered with his/her ability to enjoy or use the area? (circle number)

1 NO
2 YES

(If yes) Please describe the disability

_____

_____

Q20. Is there anything else you would like to tell us about your visit to the Ruby Canyon-Black Ridge Study Area?

THANK YOU FOR YOUR HELP!

Please return the questionnaire in the enclosed postage-paid envelope.

Appendix D

Community Leader Survey Participants

Community Leader Groups

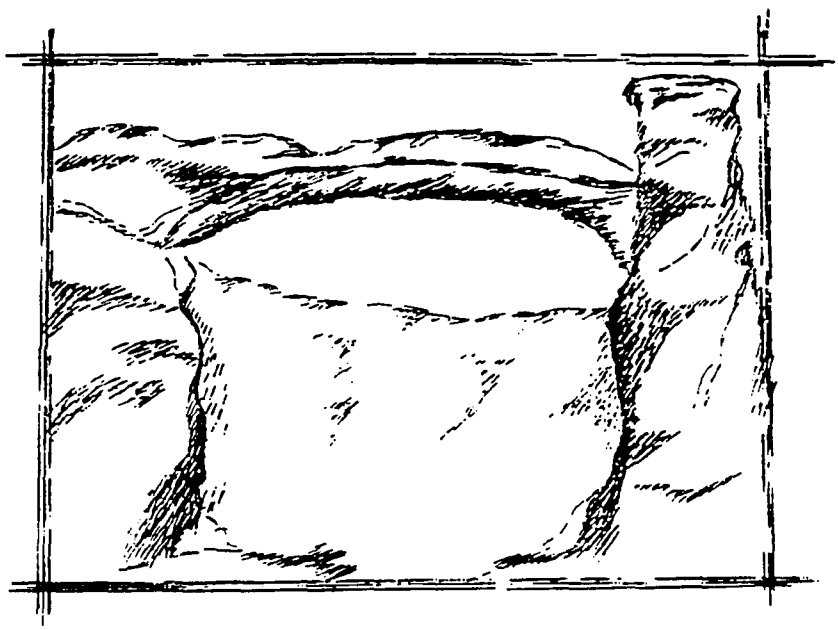
Groups	Sample Size
Government	
Officials	5
Judicial	2
Land Managers	5
Chamber of Commerce/Visitor Conv. Bureau	5
Education	1
Sheriff	1
Public and Private Health/Social Services	7
Business	
Tourism/Merchants	5
Economic Development	2
Other (insurance, real estate, etc)	4
Rec Providers	
Outfitters	4
Dinamation/Museum	3
Media	
Newspaper	2
Television/Radio	1
Natural Resource Interest Groups	3
Total	50

Appendix E

Community Leader Survey Questionnaire

Community Survey

Ruby Canyon-Black Ridge Study Area



Summer 1993

School of Forestry
Northern Arizona University
Flagstaff, AZ

NORTHERN ARIZONA UNIVERSITY

The Ruby Canyon-Black Ridge (RCBR) area provides recreation and educational opportunities to local residents and tourists from outside the area. (A map of the RCBR area is attached)

We would like you to tell us what you feel are some of the specific benefits the RCBR area provides to Grand Junction and the people who live here.

1. What benefits do <u>you</u> feel the Ruby Canyon-Black Ridge area contributes to Grand Junction and the people who live here?

2. We have listed some additional benefits that a community and its residents might realize.

   Please indicate how much the RCBR area contributes to each of the following:

   1 = No contribution
   2 = Minor contribution
   3 = Moderate contribution
   4 = Major contribution
   5 = I don't know

a.	A feeling that Grand Junction is a special place to live	1	2	3	4	5
b.	Local economic growth	1	2	3	4	5
c.	A stronger sense of community togetherness or cohesion	1	2	3	4	5
d.	A greater concern for the natural environment among residents	1	2	3	4	5
e.	Increased knowledge about the cultural resources in the area	1	2	3	4	5
f.	Maintaining an outdoor-oriented lifestyle for local residents	1	2	3	4	5
g.	A reduction in juvenile delinquency	1	2	3	4	5
h.	Stronger family bonds within the community	1	2	3	4	5
i.	The appeal of the Grand Junction area as a tourism attraction	1	2	3	4	5
j.	Opportunities for residents to grow spiritually	1	2	3	4	5
k.	Opportunities for exercise that can improve the health of local people	1	2	3	4	5
l.	A more stable economy within the community	1	2	3	4	5

1 = No contribution
2 = Minor contribution
3 = Moderate contribution
4 = Major contribution
5 = I don't know

m.	Greater awareness of the ethnic diversity within the community	1	2	3	4	5
n.	Increased work productivity among community residents	1	2	3	4	5
o.	Reduced health costs among community residents	1	2	3	4	5
p.	A greater understanding of the natural environment in which residents live	1	2	3	4	5
q.	The opportunity for residents to live a western lifestyle	1	2	3	4	5
r.	A more stable economy for the surrounding region	1	2	3	4	5
s.	Preserving the small-town character of our community	1	2	3	4	5

3. In what ways do you feel the Bureau of Land Management (BLM), the agency that administers this area, is helping people achieve these benefits?

4. What is the BLM not doing that they should do to help people achieve these benefits?

5. We have divided the Ruby Canyon-Black Ridge Study Area into 5 zones (see map). These zones reflect a variety of resources and uses within the study area. Please look at each zone and, using the response categories provided below, indicate what you feel is the primary value of each zone. Please specify only one response for each zone.

Possible Responses:

a. a tourism attraction
b. rangeland for livestock
c. wildlife habitat
d. a recreation area
e. wilderness
f. an educational resource
g. a cultural resource
h. other (please write it in the space provided)

Zone	Most valuable as:
1	_____
2	_____
3	_____
4	_____
5	_____

We would like to ask about your involvement with the Grand Junction Office of the Bureau of Land Management (BLM) and your opinions about their management of the RCBR area.

6. Have you contacted anyone from the Grand Junction BLM office for information, to involve BLM in your organization's activities, or other purposes during the past year? (circle one)

1 YES
2 NO (If No, skip to Question 8)

7. How often did you interact with or contact people from the Grand Junction BLM office during the past year? (circle one)

1 1 to 5 times
2 6 to 10 times
3 11 to 20 times
4 More than 20 times

8. Using the following pairs of words, please indicate how you would describe BLM's <u>management</u> of the Ruby Canyon-Black Ridge Area. For each of the paired items below, place a checkmark (✓) in the blank that best represents your view.

HANDS-ON	___	___	___	___	___	HAND'S OFF
MANY USES	___	___	___	___	___	SINGLE USE
PROTECTION	___	___	___	___	___	DEVELOPMENT
CONSERVATION	___	___	___	___	___	EXPLOITATION
PRESERVATION	___	___	___	___	___	UTILIZATION
RESPONDS TO LOCAL NEEDS	___	___	___	___	___	RESPONDS TO NATIONAL NEEDS
ANTICIPATE PROBLEMS	___	___	___	___	___	REACT TO PROBLEMS

9. Please indicate your general level of satisfaction with each of the following (circle the number that best reflects your level of satisfation):

	Totally Dissatisfied			Feel Neutral			Totally Satisfied
a. Your association with Grand Junction BLM personnel or office staff	-3	-2	-1	0	1	2	3
b. For the Ruby Canyon-Black Ridge Study Area, how do you feel about:							
- how the land is being cared for	-3	-2	-1	0	1	2	3
- how the visitors are cared for	-3	-2	-1	0	1	2	3
- BLM's management of the area (permits, rules, facilities, etc.)	-3	-2	-1	0	1	2	3

If you are dissatisfied, what changes do you recommend to the BLM? (Please be as specific as possible)

10. How active do you think the Grand Junction office of the BLM is in promoting recreation opportunities that could enhance tourism in the Grand Junction area? (circle one)

Very Active	Moderately Active	Somewhat Active	Not Active	Don't Know

11. How active do you feel the BLM **should be** in promoting recreation opportunities that could enhance tourism in the Grand Junction area? (circle one)

Very Active	Moderately Active	Somewhat Active	Not Active	Don't Know

12. What would be your biggest concern with increased promotion of recreation opportunities in the area?

THANK YOU VERY MUCH FOR YOUR HELP!